HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SAT-A65/A65A RM-Y807
SAT-B65/B65A RM-Y812
SERVICE MANUAL SAS-B65D (INCLUDES B65/B65A AND SAN-18D5)

US Model

ORIGINAL MANUAL ISSUE DATE: 3/2003

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
3/2003	No revisions or updates are applicable at this time.	
3/2003	Correction-1	Added destination to Front Cover, Corrected P/N on back of manual

DIRECTV®

DIGITAL SATELLITE RECEIVER / SATELLITE ANTENNA

SONY®

9-965-927-02

SAT-A65/A65A RM-Y807
SAT-B65/B65A RM-Y812
SERVICE MANUAL SAS-B65D (INCLUDES B65/B65A AND SAN-18D5)

US Model

RM-Y807

SAS-B65D

SAT-A65

DIRECTV®

DIGITAL SATELLITE RECEIVER / SATELLITE ANTENNA

SONY®

9-965-927-02

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SPECIFICATIONS

FOR DIGITAL SATELLITE RECEIVER:

Input Jacks

UHF/VHF 75 ohm F-type
Satellite Antenna 75 ohm F-type
RF Remote Antenna (SAT-A65/A65A Only)
AC Power (120V, 60Hz)

Output Jacks

VHF (SAT)/UHF 75 ohm F-type
VCR Control (1) VCR Controller (SAT-A65/A65A Only)
(or monoaural cable for Sony SmartFile VCRs) (SAT-A65/A65A Only)
Low Speed Data, RJ-11 (SAT-A65/A65A Only)
Digital Audio Out (Optical), Optical Rectangular (SAT-A65/A65A Only)
S-VIDEO OUT, 4-pin mini DIN
Audio R/L (2) (SAT-A65/A65A Only)
Audio R/L (SAT-B65/B65A Only)
Video (2) (SAT-A65/A65A Only)
Video (SAT-B65/B65A Only)
Telephone Line, RJ11

Input Frequency

950 - 1450 Mhz

Power Requirements

120V AC, 60Hz

Power Consumption

24 W typical

Dimensions (w/h/d)

11 x $2^{1/2}$ x $8^{2/5}$ inches (280 x 64 x 214 mm)

Weight (unit)

3.5 lbs. (1.6 kg)

Supplied Accessories

Remote Commander RM-Y807 (SAT-A65//A65A Only)
Remote Commander RM-Y812 (SAT-B65/B65A Only)
Size AA Batteries (2)
Access Card (1)
Audio/Video Cable (1)
S-Video Cable (1) (SAT-A65/A65A Only)
Coaxial RF Cable (1)
Telephone Line Cord
VCR Controller (1) (SAT-A65/A65A Only)
RF Antenna (SAT-A65/A65A Only)

Optional Sony-brand Digital Satellite Receiver Accessories

Satellite Antenna SAN-18D4
Satellite Antenna SAN-24MD1
Local TV Antenna ANJ-AA1

FOR SATELLITE ANTENNAS:

Input Frequency

12.2 - 12.7 GHz

Output Frequency

950 - 1450 MHz

Output Connector

F-Type Female

Power Consumption

3.0 W maximum

Supply Voltage

DC + 10.5 - 14.0 V for RHCP • DC + 15.5 - 21.0 V for LHCP

Dimensions (w/h/d)

$18^{5/8}$ x 31 x $18^{5/16}$ inches (473 x 787 x 643 mm)

Weight

8 lbs., 6 oz. (3.8 kg)

Supplied Accessories

Weatherboot (2 pcs.)
Signal Seeker (1 pc.)
Snap-in Clip (dual type) (1 pc.)
Bolt for Ground Terminal (1 pc.)
Bolt for LNB Support Arm (2 pcs.)

Optional Accessories

Installation Kit ANJ-DS2
Amplifier EAC-DA1
Diplexer EAC-DD1
Voltage Switch ECA-DV2
Multi-Room A/V
Distribution System MDR-D1
Coaxial Cable 25 ft. SAK-C25
Coaxial Cable 75 ft. SAK-C75
Flat Cable DAK-F1

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with sony parts whose part numbers appear as shown in this manual or in supplements published by sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

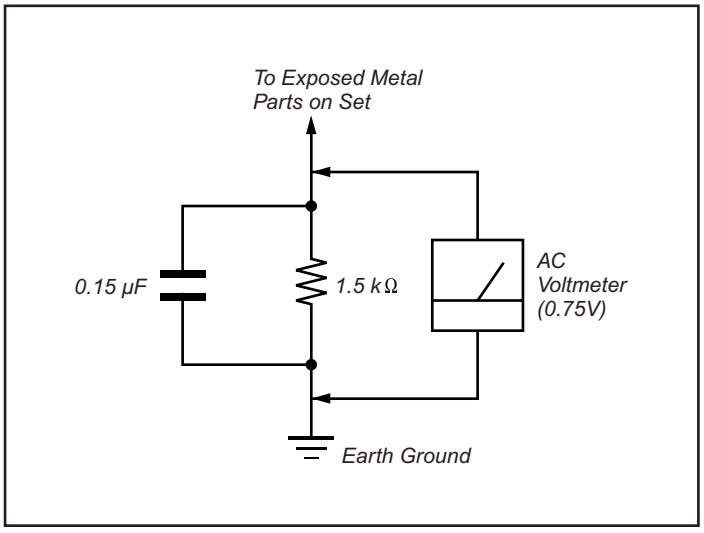


Figure A. Using an AC voltmeter to check AC leakage.

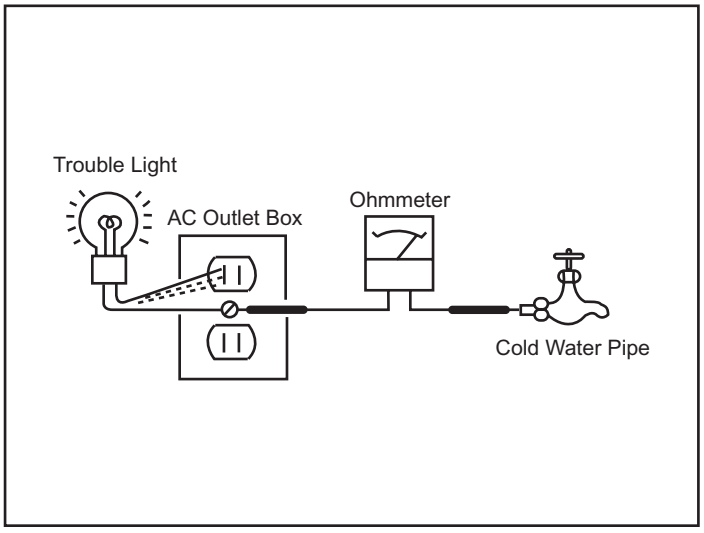
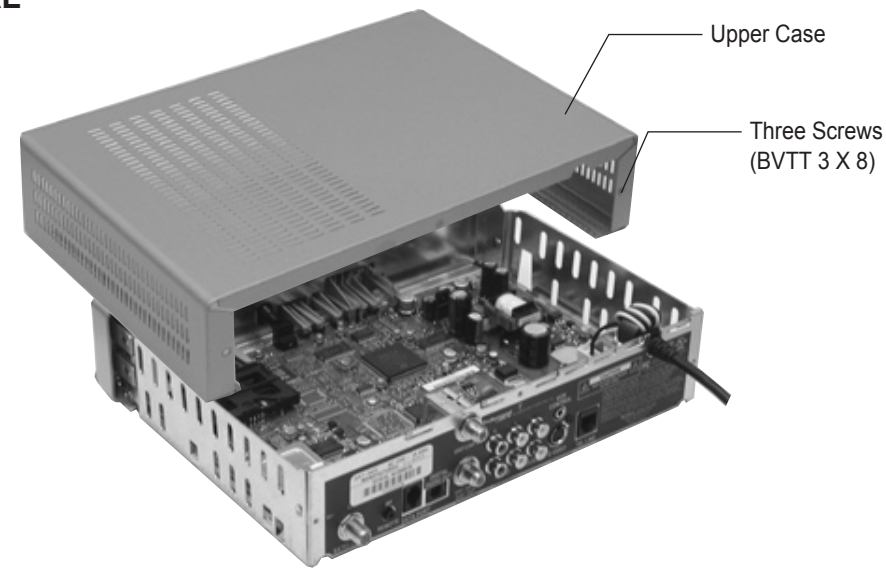


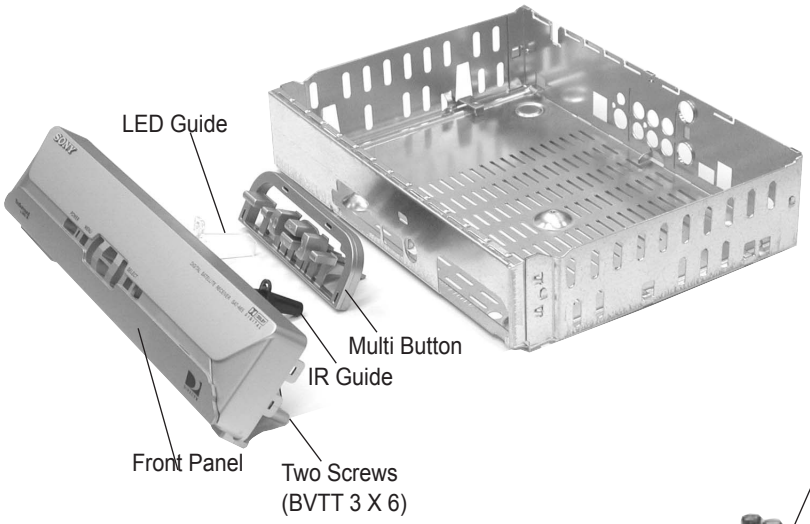
Figure B. Checking for earth ground.

SECTION 1: DISASSEMBLY

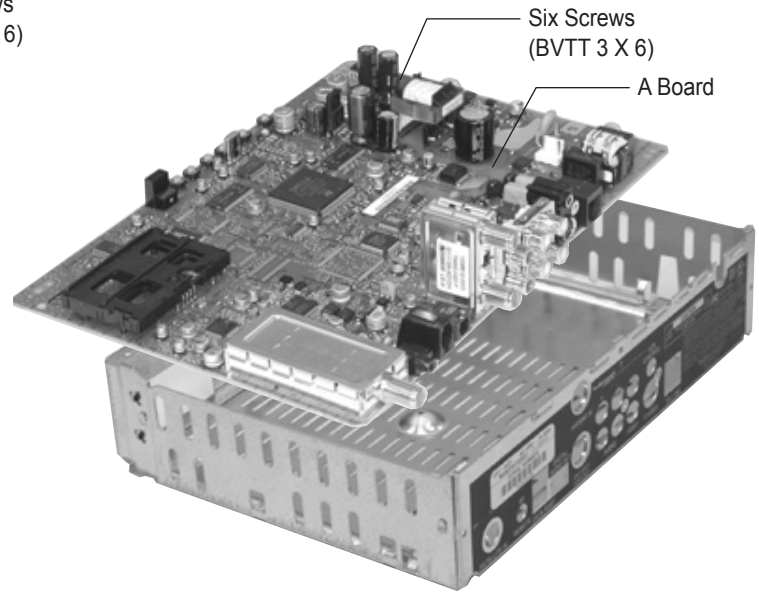
1-1. UPPER CASE REMOVAL



1-2. FRONT PANEL REMOVAL

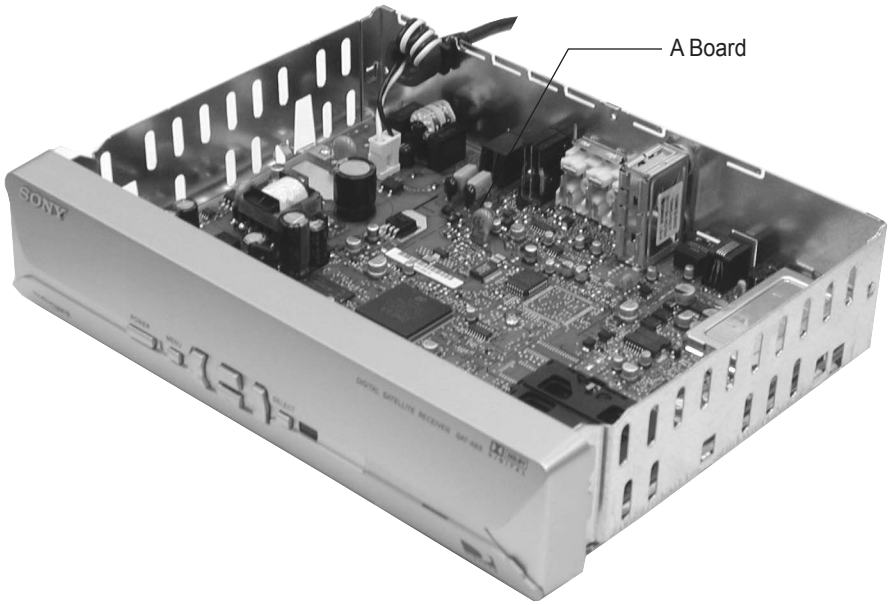


1-3. A BOARD REMOVAL



SECTION 2: DIAGRAMS

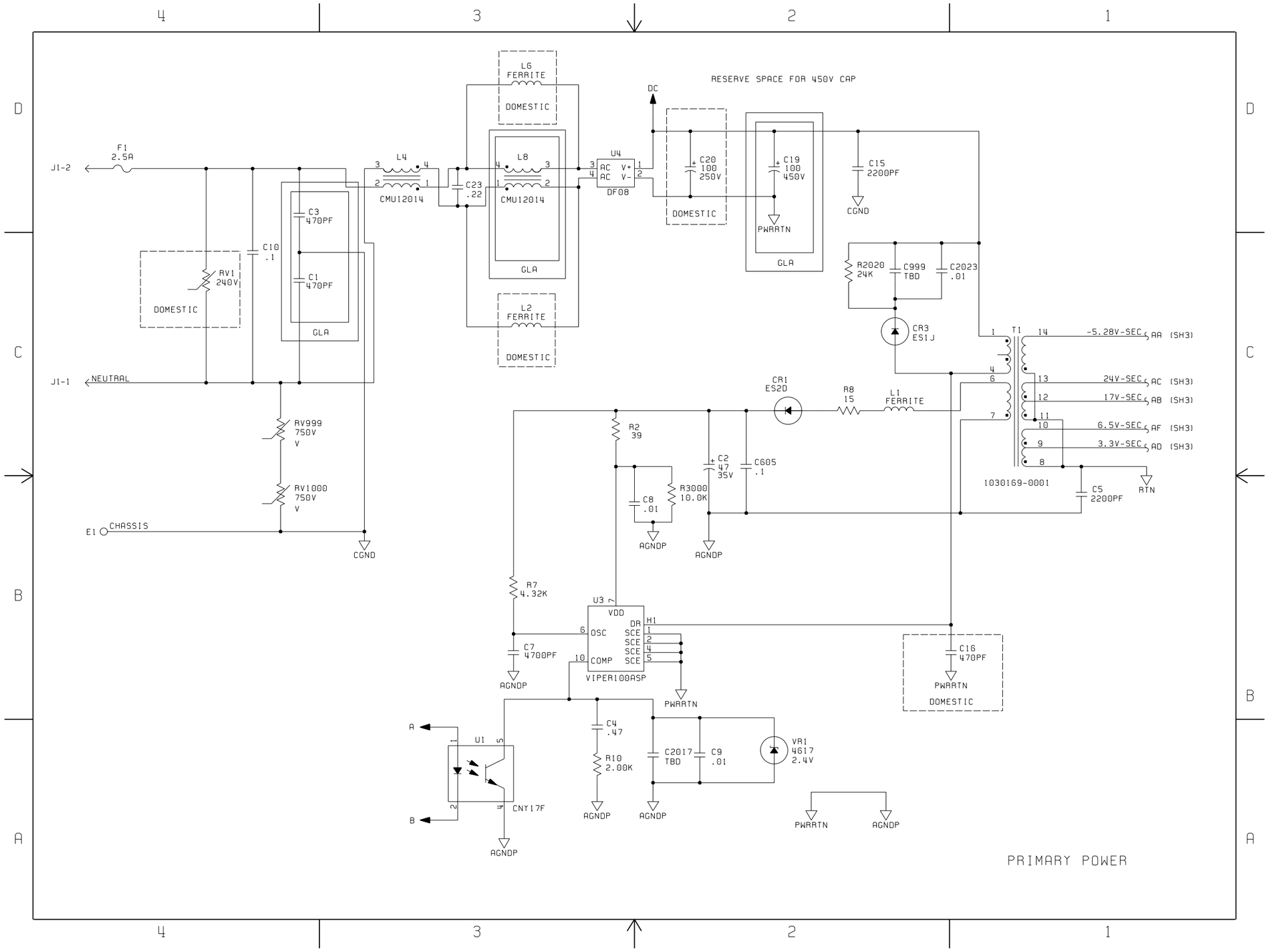
2-1. CIRCUIT BOARDS LOCATION



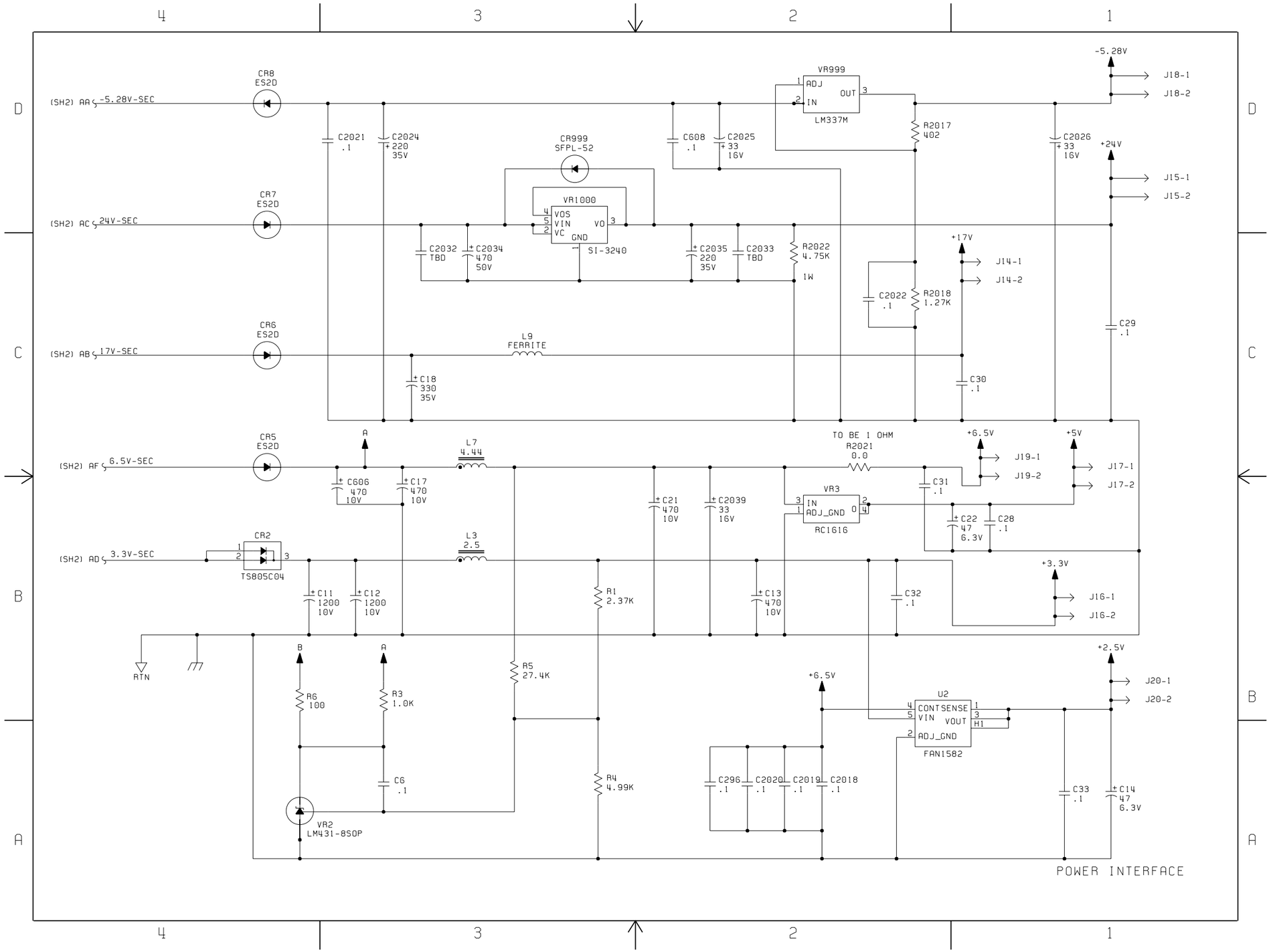
2-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

- All capacitors are in µF unless otherwise noted.
  pF: mmF 50 WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows:
  Pitch: 5mm
  Rating electrical power 1/4W (CHIP: 1/10W)
- All resistors are in ohms.
  KW = 1000W • MW = 1000KW
- : nonflammable resistor
- : fusible resistor
- △ : internal component
- : panel designation and adjustment for repair
- ⊥ : earth-ground
- : earth-chassis
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in Volts
- Readings are taken with a 10M ohm digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- * : cannot be measured
- ▬▬ : B + Line
- ----- : B - Line
- ⇨ : Signal path

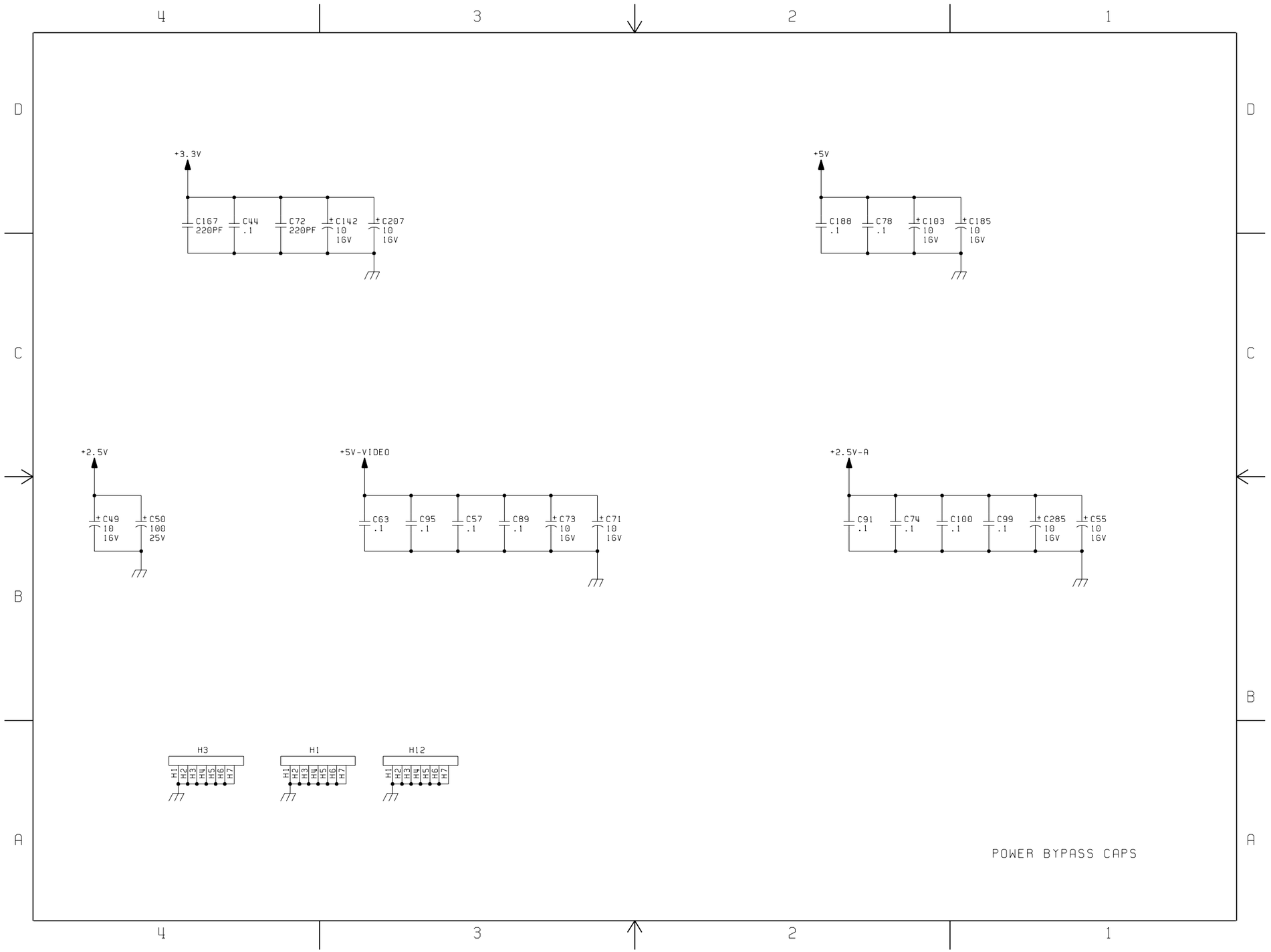
A BOARD SCHEMATIC DIAGRAM (1 OF 24)



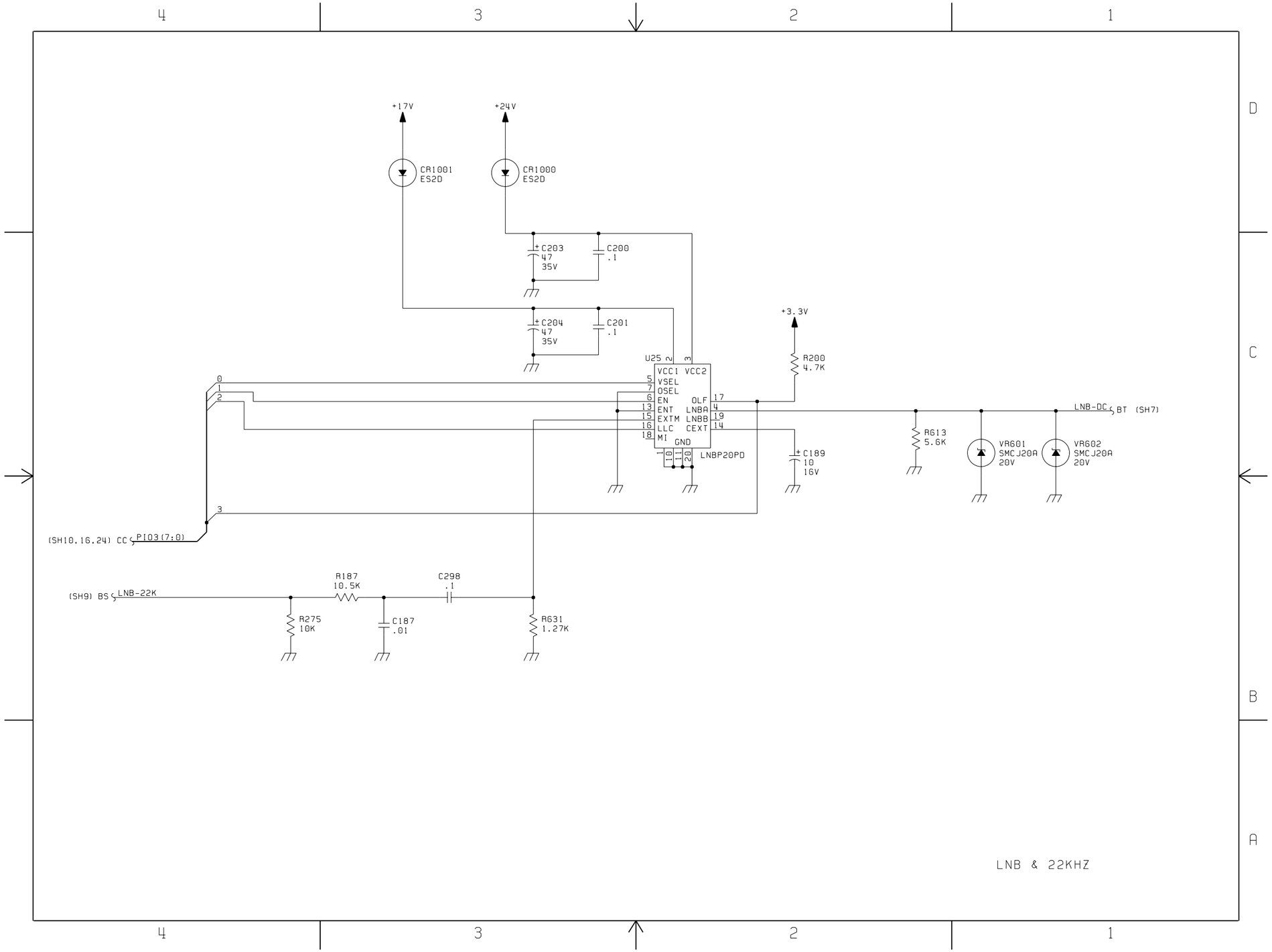
A BOARD SCHEMATIC DIAGRAM (2 OF 24)



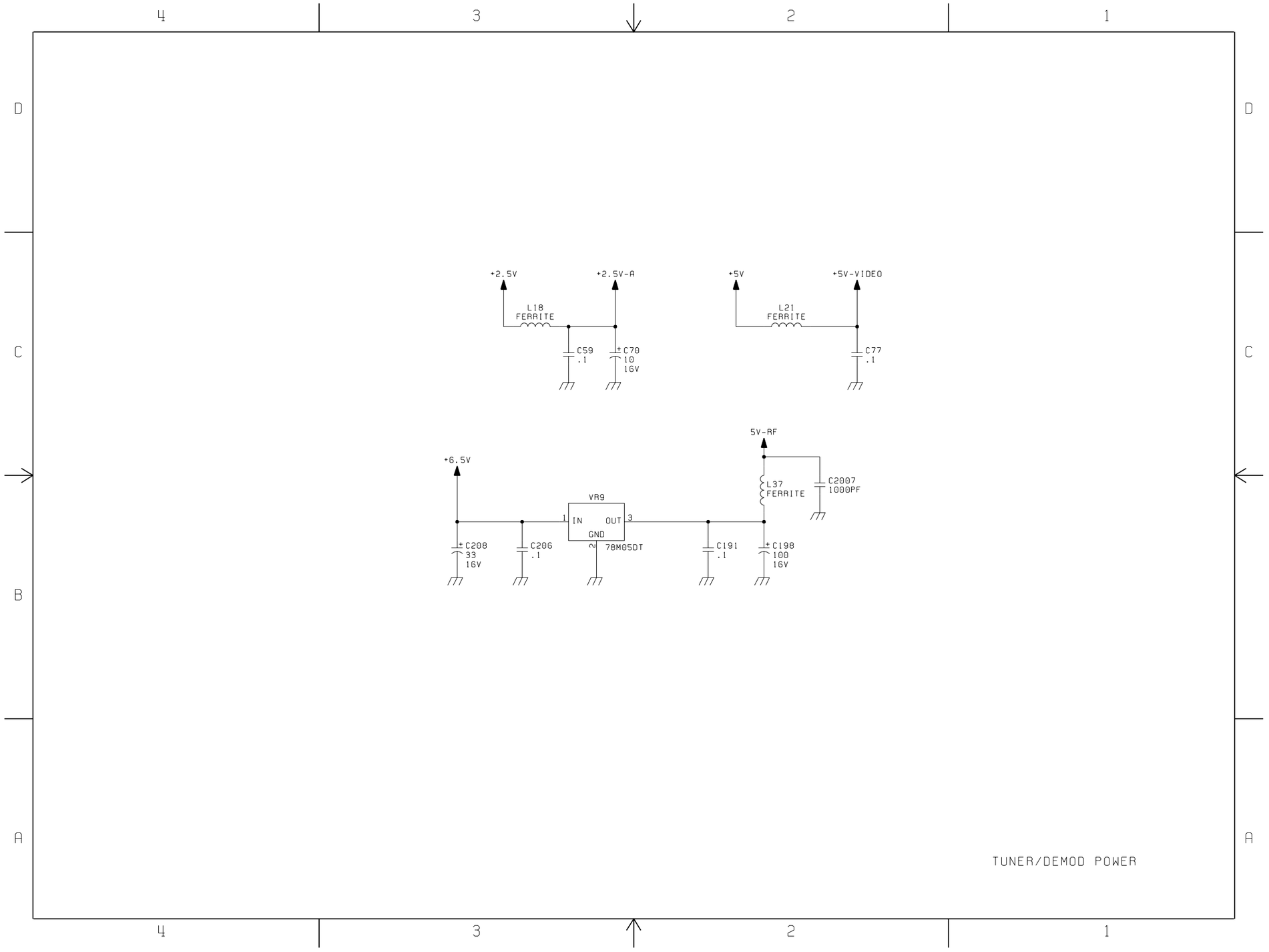
A BOARD SCHEMATIC DIAGRAM (3 OF 24)



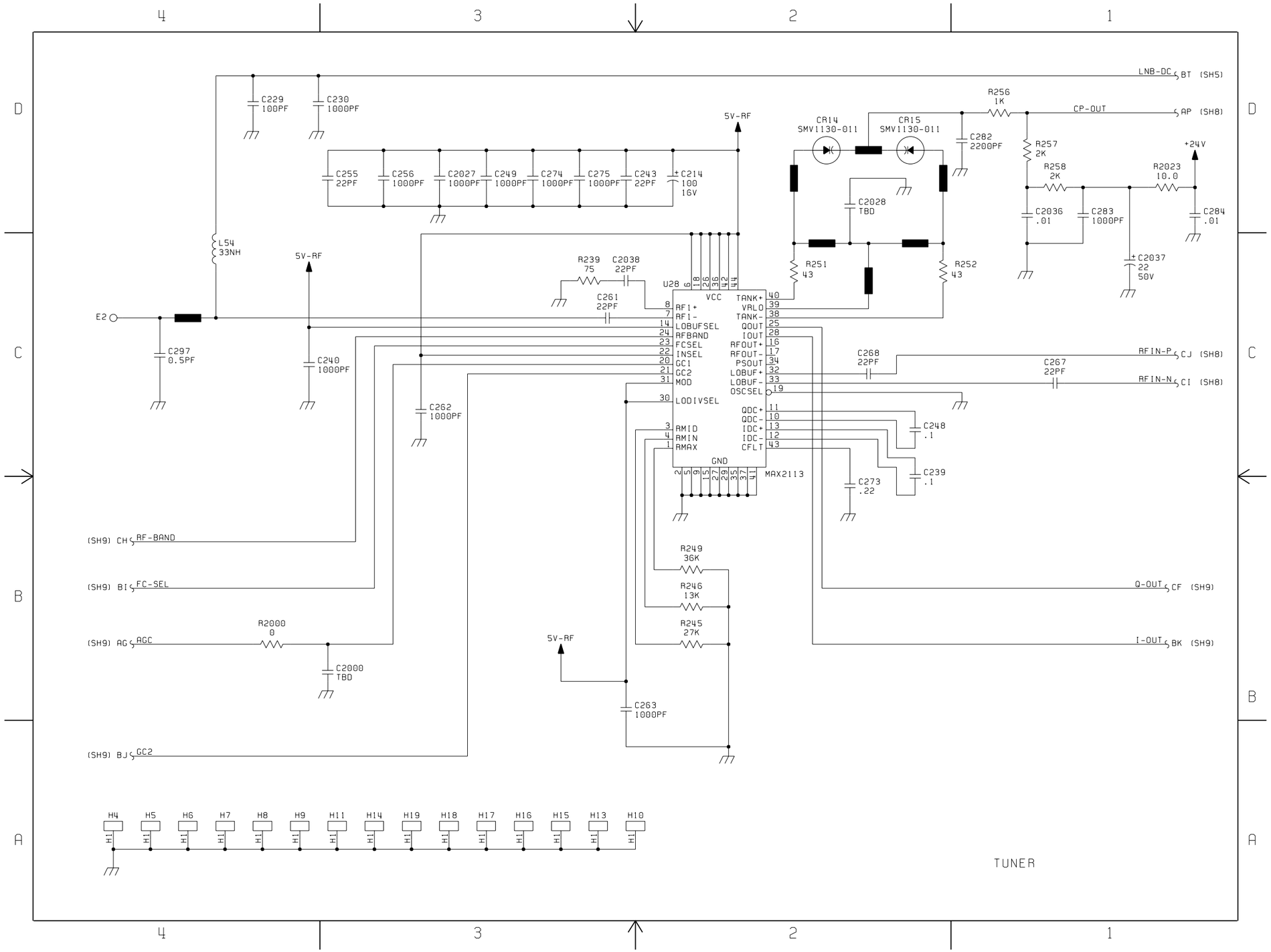
A BOARD SCHEMATIC DIAGRAM (4 OF 24)



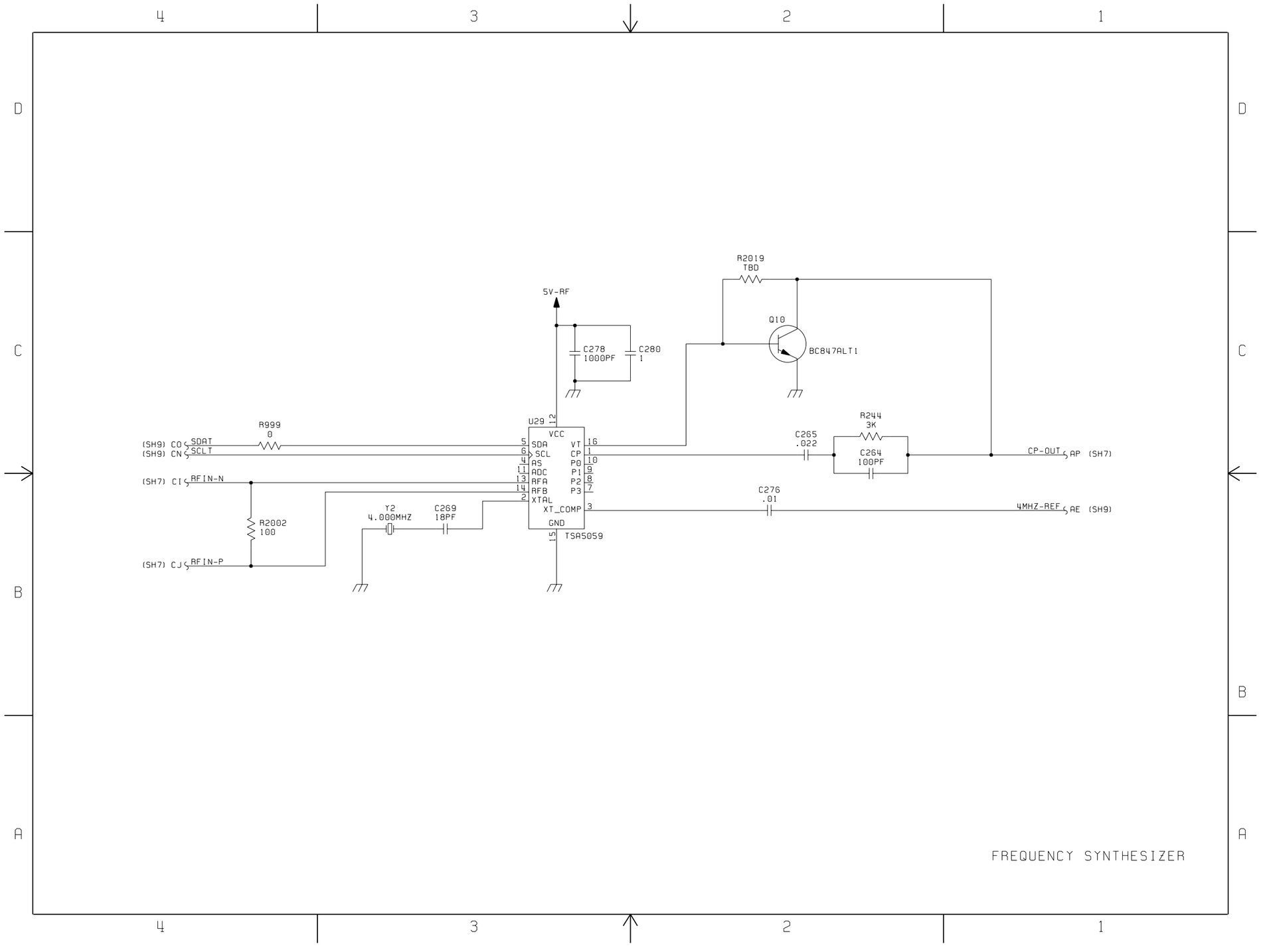
A BOARD SCHEMATIC DIAGRAM (5 OF 24)

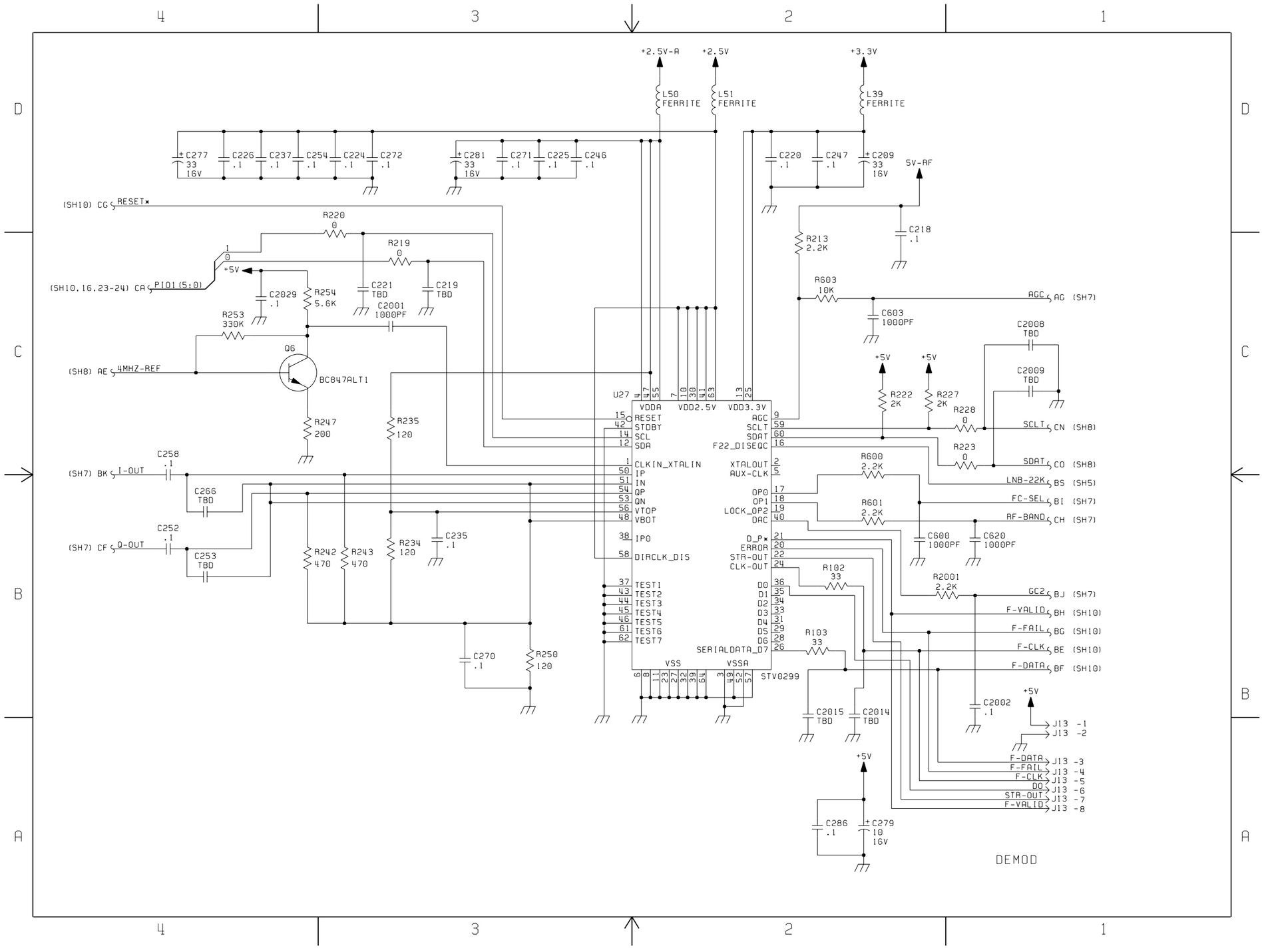


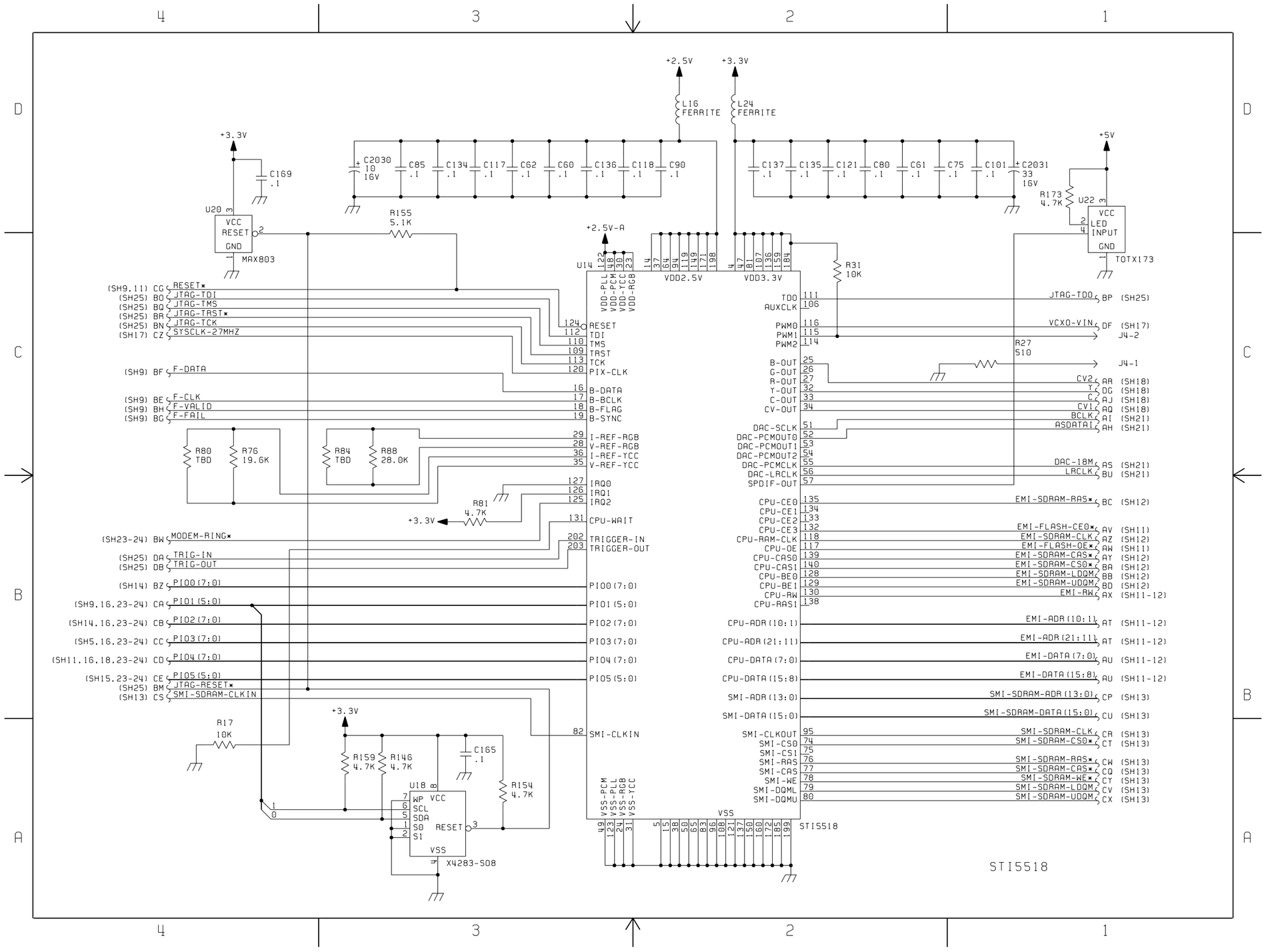
A BOARD SCHEMATIC DIAGRAM (6 OF 24)

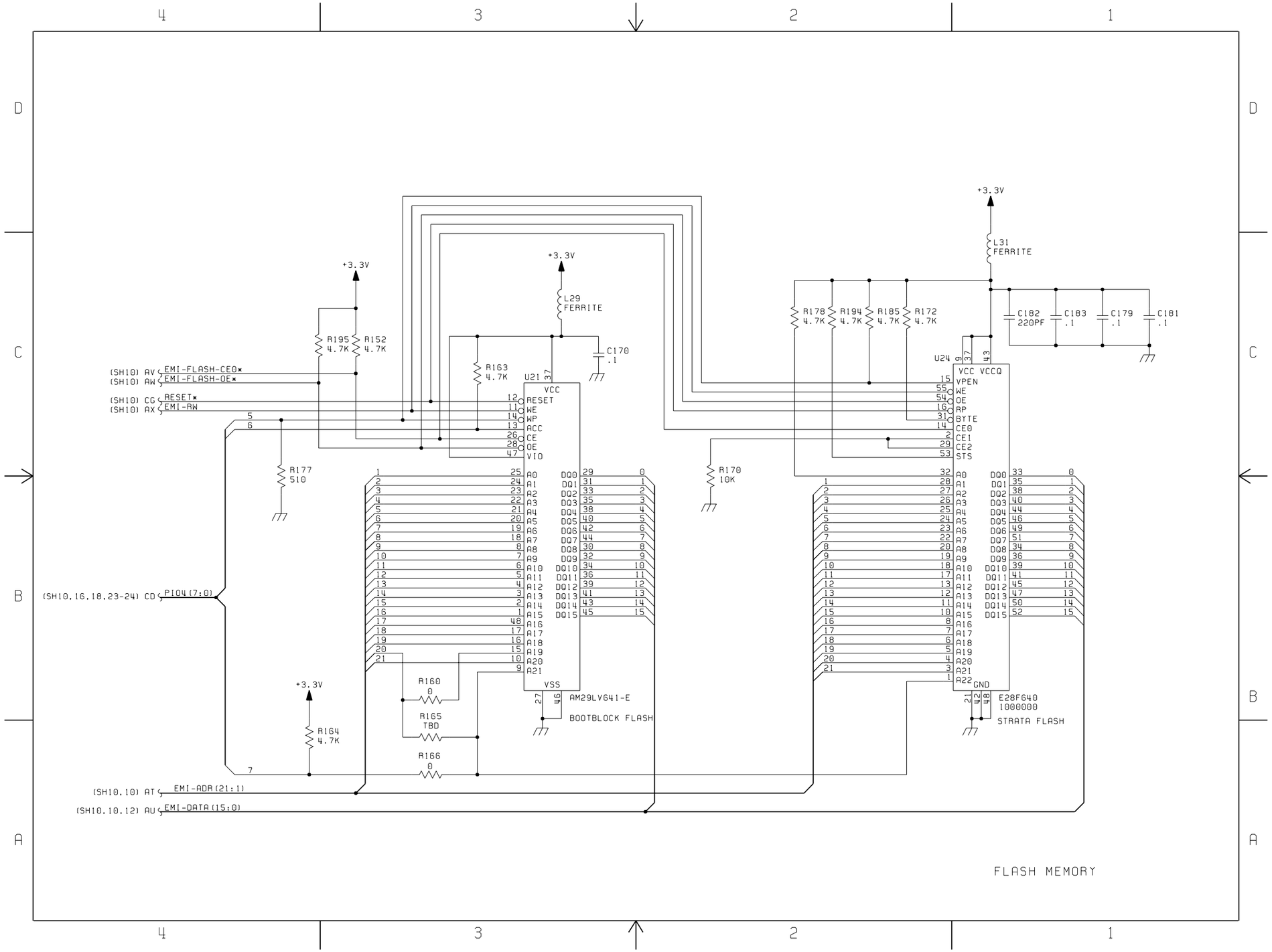


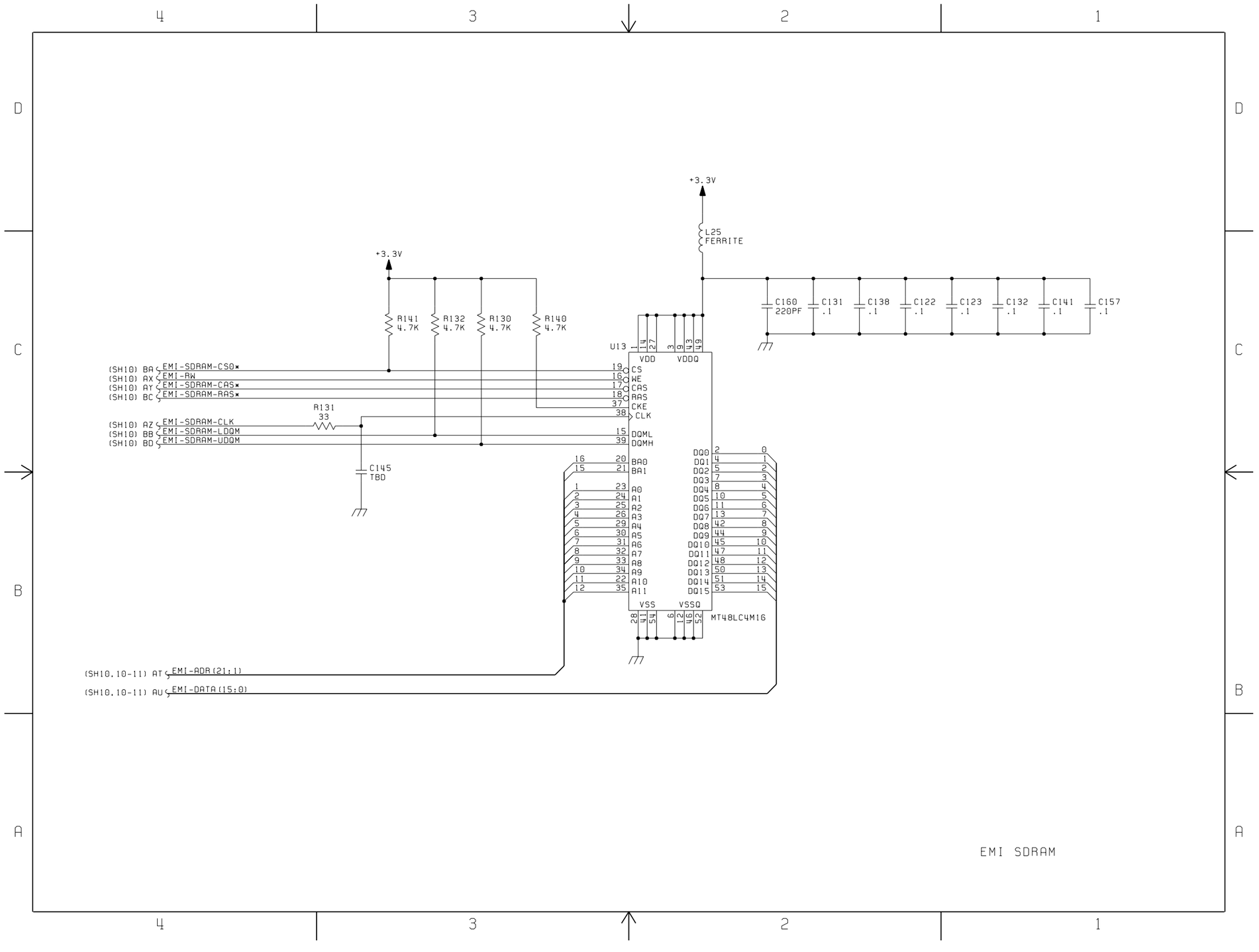
A BOARD SCHEMATIC DIAGRAM (7 OF 24)

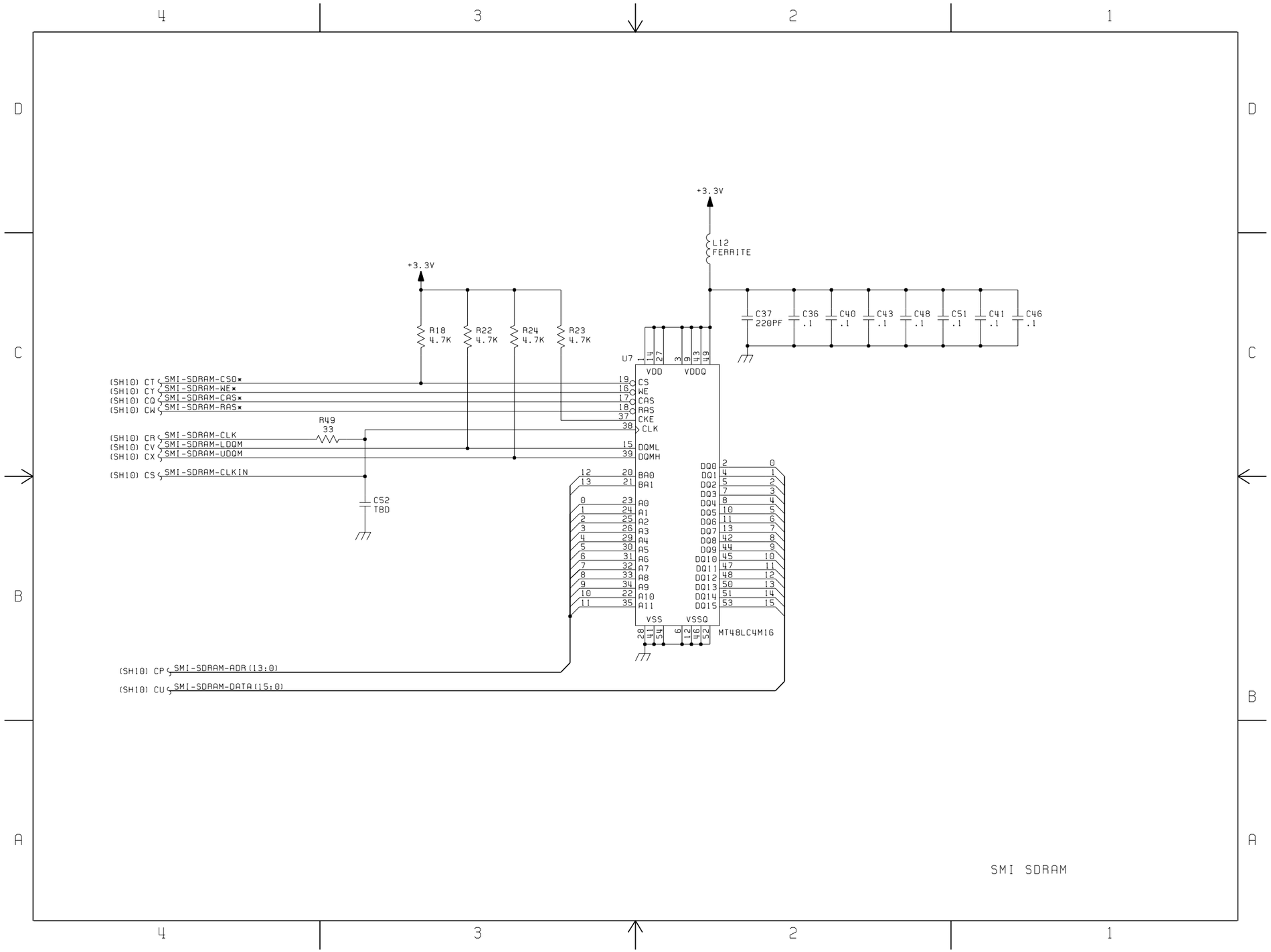


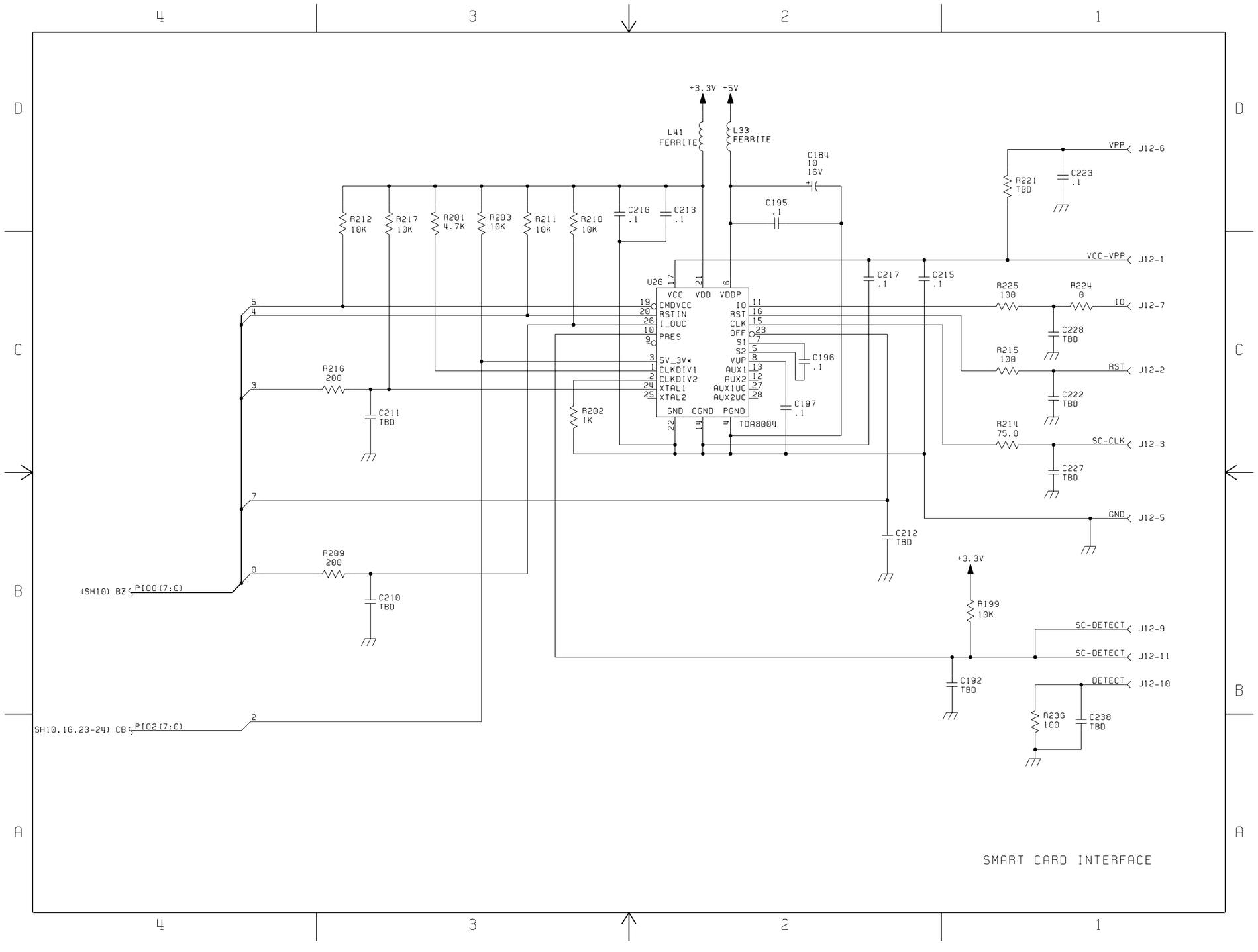

+2.5V-A
+2.5V
+3.3V
L50 FERRITE
L51 FERRITE
L39 FERRITE
C277 33 16V
C226 .1
C237 .1
C254 .1
C224 .1
C272 .1
C281 33 16V
C271 .1
C225 .1
C246 .1
C220 .1
C247 .1
C209 33 16V
5V-RF
C218 .1
R213 2.2K
(SH10) CG RESET*
R220 0
R219 0
(SH10,16,23-24) CA PIO1(5:0)
+5V
C2029 .1
R254 5.6K
C221 TBD
C219 TBD
C2001 1000PF
R253 330K
R603 10K
AGC
AG (SH7)
C603 1000PF
C2008 TBD
C2009 TBD
(SH8) AE 4MHZ-REF
Q6
BC847ALT1
R247 200
R235 120
R222 2K
R227 2K
R228 0
SCLT
CN (SH8)
R223 0
SDAT
CO (SH8)
C258 .1
(SH7) BK I-OUT
C266 TBD
C252 .1
(SH7) CF Q-OUT
C253 TBD
R242 470
R243 470
R234 120
C235 .1
C270 .1
R250 120
R600 2.2K
R601 2.2K
LNB-22K
BS (SH5)
FC-SEL
BI (SH7)
RF-BAND
CH (SH7)
C600 1000PF
C620 1000PF
R102 33
R2001 2.2K
GC2
BJ (SH7)
F-VALID
BH (SH10)
F-FAIL
BG (SH10)
F-CLK
BE (SH10)
F-DATA
BF (SH10)
R103 33
C2002 .1
C2015 TBD
C2014 TBD
J13 -1
J13 -2
J13 -3
J13 -4
J13 -5
J13 -6
J13 -7
J13 -8
C286 .1
C279 10 16V
U27
VDDA
VDD2.5V
VDD3.3V
RESET
STDBY
SCL
SDA
CLKIN_XTALIN
IP
IN
QP
QN
VTOP
VBOT
IP0
DIRCLK_DIS
TEST1
TEST2
TEST3
TEST4
TEST5
TEST6
TEST7
AGC
SCLT
SDAT
F22_DISEQC
XTALOUT
AUX-CLK
OP0
OP1
LOCK_OP2
DAC
D_P*
ERROR
STR-OUT
CLK-OUT
D0
D1
D2
D3
D4
D5
D6
SERIALDATA_D7
VSS
VSSA
STV0299
DEMOD


+2.5V
+3.3V
L16 FERRITE
L24 FERRITE
+5V
C2030 10 16V
C85 .1
C134 .1
C117 .1
C62 .1
C60 .1
C136 .1
C118 .1
C90 .1
C137 .1
C135 .1
C121 .1
C80 .1
C61 .1
C75 .1
C101 .1
C2031 33 16V
C169 .1
U20
VCC
RESET
GND
MAX803
R155 5.1K
R173 4.7K
U22
VCC
LED INPUT
GND
TOTX173
+2.5V-A
U14
VDD-PLL
VDD-PCM
VDD-YCC
VDD-RGB
VDD2.5V
VDD3.3V
R31 10K
(SH9,11) CG RESET*
(SH25) BO JTAG-TDI
(SH25) BQ JTAG-TMS
(SH25) BR JTAG-TRST*
(SH25) BN JTAG-TCK
(SH17) CZ SYSCLK-27MHZ
(SH9) BF F-DATA
(SH9) BE F-CLK
(SH9) BH F-VALID
(SH9) BG F-FAIL
RESET
TDI
TMS
TRST
TCK
PIX-CLK
B-DATA
B-BCLK
B-FLAG
B-SYNC
I-REF-RGB
V-REF-RGB
I-REF-YCC
V-REF-YCC
IRQ0
IRQ1
IRQ2
CPU-WAIT
TRIGGER-IN
TRIGGER-OUT
PIO0(7:0)
PIO1(5:0)
PIO2(7:0)
PIO3(7:0)
PIO4(7:0)
PIO5(5:0)
SMI-CLKIN
TDO
AUXCLK
PWM0
PWM1
PWM2
B-OUT
G-OUT
R-OUT
Y-OUT
C-OUT
CV-OUT
DAC-SCLK
DAC-PCMOUT0
DAC-PCMOUT1
DAC-PCMOUT2
DAC-PCMCLK
DAC-LRCLK
SPDIF-OUT
CPU-CE0
CPU-CE1
CPU-CE2
CPU-CE3
CPU-RAM-CLK
CPU-OE
CPU-CAS0
CPU-CAS1
CPU-BE0
CPU-BE1
CPU-RW
CPU-RAS1
CPU-ADR(10:1)
CPU-ADR(21:11)
CPU-DATA(7:0)
CPU-DATA(15:8)
SMI-ADR(13:0)
SMI-DATA(15:0)
SMI-CLKOUT
SMI-CS0
SMI-CS1
SMI-RAS
SMI-CAS
SMI-WE
SMI-DQML
SMI-DQMU
JTAG-TDO BP (SH25)
VCXO-VIN DF (SH17)
J4-2
R27 510
J4-1
CV2 AR (SH18)
Y DG (SH18)
C AJ (SH18)
CVI AQ (SH18)
BCLK AI (SH21)
ASDATA1 AH (SH21)
DAC-18M AS (SH21)
LRCLK BU (SH21)
EMI-SDRAM-RAS* BC (SH12)
EMI-FLASH-CE0* AV (SH11)
EMI-SDRAM-CLK AZ (SH12)
EMI-FLASH-OE* AW (SH11)
EMI-SDRAM-CAS* AY (SH12)
EMI-SDRAM-CS0* BA (SH12)
EMI-SDRAM-LDQM BB (SH12)
EMI-SDRAM-UDQM BD (SH12)
EMI-RW AX (SH11-12)
EMI-ADR(10:1) AT (SH11-12)
EMI-ADR(21:11) AT (SH11-12)
EMI-DATA(7:0) AU (SH11-12)
EMI-DATA(15:8) AU (SH11-12)
SMI-SDRAM-ADR(13:0) CP (SH13)
SMI-SDRAM-DATA(15:0) CU (SH13)
SMI-SDRAM-CLK CR (SH13)
SMI-SDRAM-CS0* CT (SH13)
SMI-SDRAM-RAS* CW (SH13)
SMI-SDRAM-CAS* CQ (SH13)
SMI-SDRAM-WE* CY (SH13)
SMI-SDRAM-LDQM CV (SH13)
SMI-SDRAM-UDQM CX (SH13)
VSS
STI5518
R80 TBD
R76 19.6K
R84 TBD
R88 28.0K
R81 4.7K
R17 10K
R159 4.7K
R146 4.7K
C165 .1
R154 4.7K
U18
WP VCC
SCL
SDA
S0 RESET
S1
X4283-S08
(SH23-24) BW MODEM-RING*
(SH25) DA TRIG-IN
(SH25) DB TRIG-OUT
(SH14) BZ PIO0(7:0)
(SH9,16,23-24) CA PIO1(5:0)
(SH14,16,23-24) CB PIO2(7:0)
(SH5,16,23-24) CC PIO3(7:0)
(SH11,16,18,23-24) CD PIO4(7:0)
(SH15,23-24) CE PIO5(5:0)
(SH25) BM JTAG-RESET*
(SH13) CS SMI-SDRAM-CLKIN

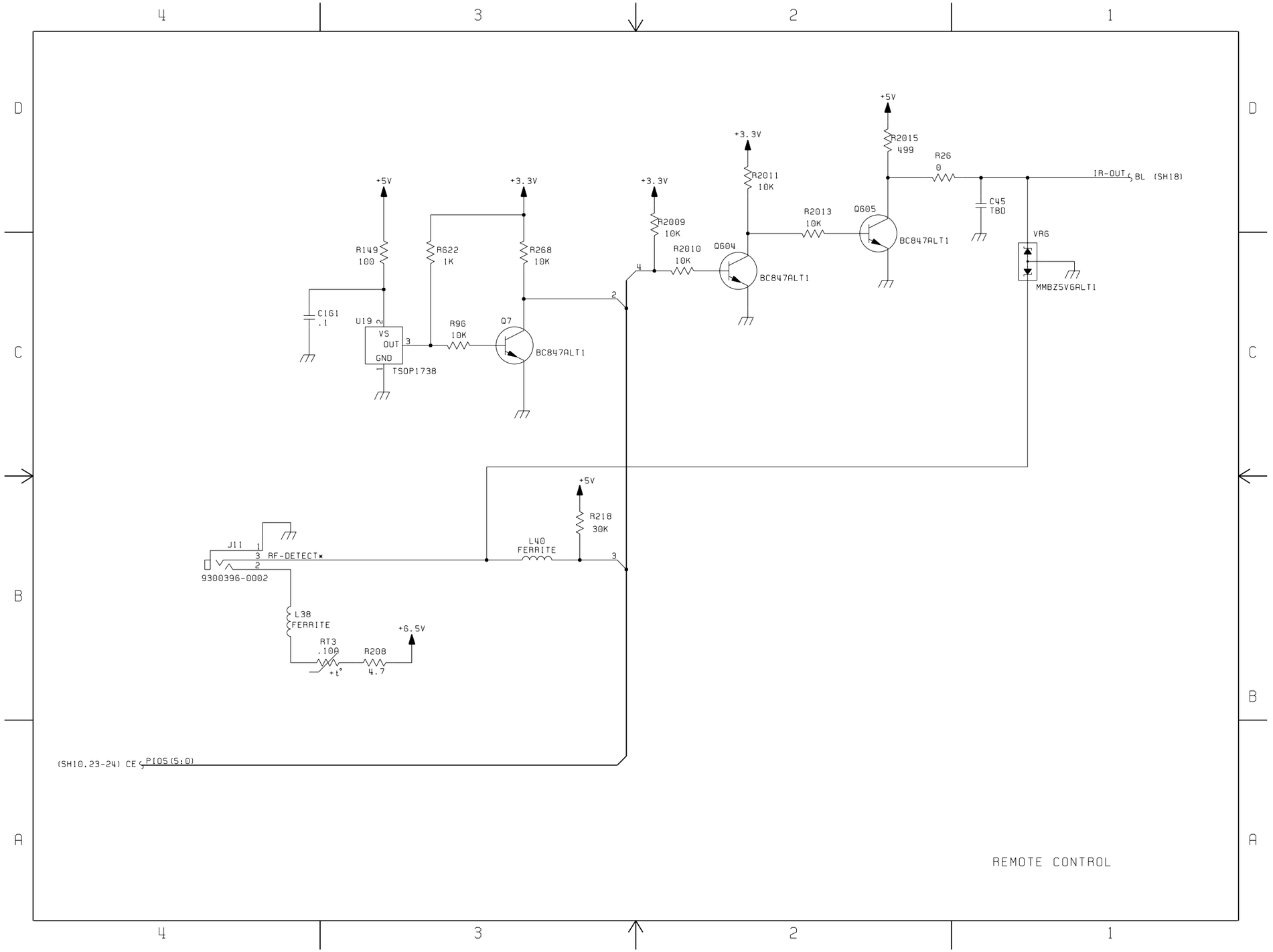

+3.3V
L31
FERRITE
L29
FERRITE
R178 4.7K
R194 4.7K
R185 4.7K
R172 4.7K
C182 220PF
C183 .1
C179 .1
C181 .1
C170 .1
R195 4.7K
R152 4.7K
R163 4.7K
U21
U24
VCC
VCCQ
(SH10) AV EMI-FLASH-CE0*
(SH10) AW EMI-FLASH-OE*
(SH10) CG RESET*
(SH10) AX EMI-RW
RESET
WE
WP
ACC
CE
OE
VIO
VPEN
BYTE
CE0
CE1
CE2
STS
R177 510
R170 10K
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20 A21
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15
A22
(SH10.16.18.23-24) CD PIO4(7:0)
+3.3V
R160 0
R165 TBD
R166 0
R164 4.7K
VSS
GND
AM29LV641-E
BOOTBLOCK FLASH
E28F640
1000000
STRATA FLASH
(SH10.10) AT EMI-ADR(21:1)
(SH10.10.12) AU EMI-DATA(15:0)
FLASH MEMORY

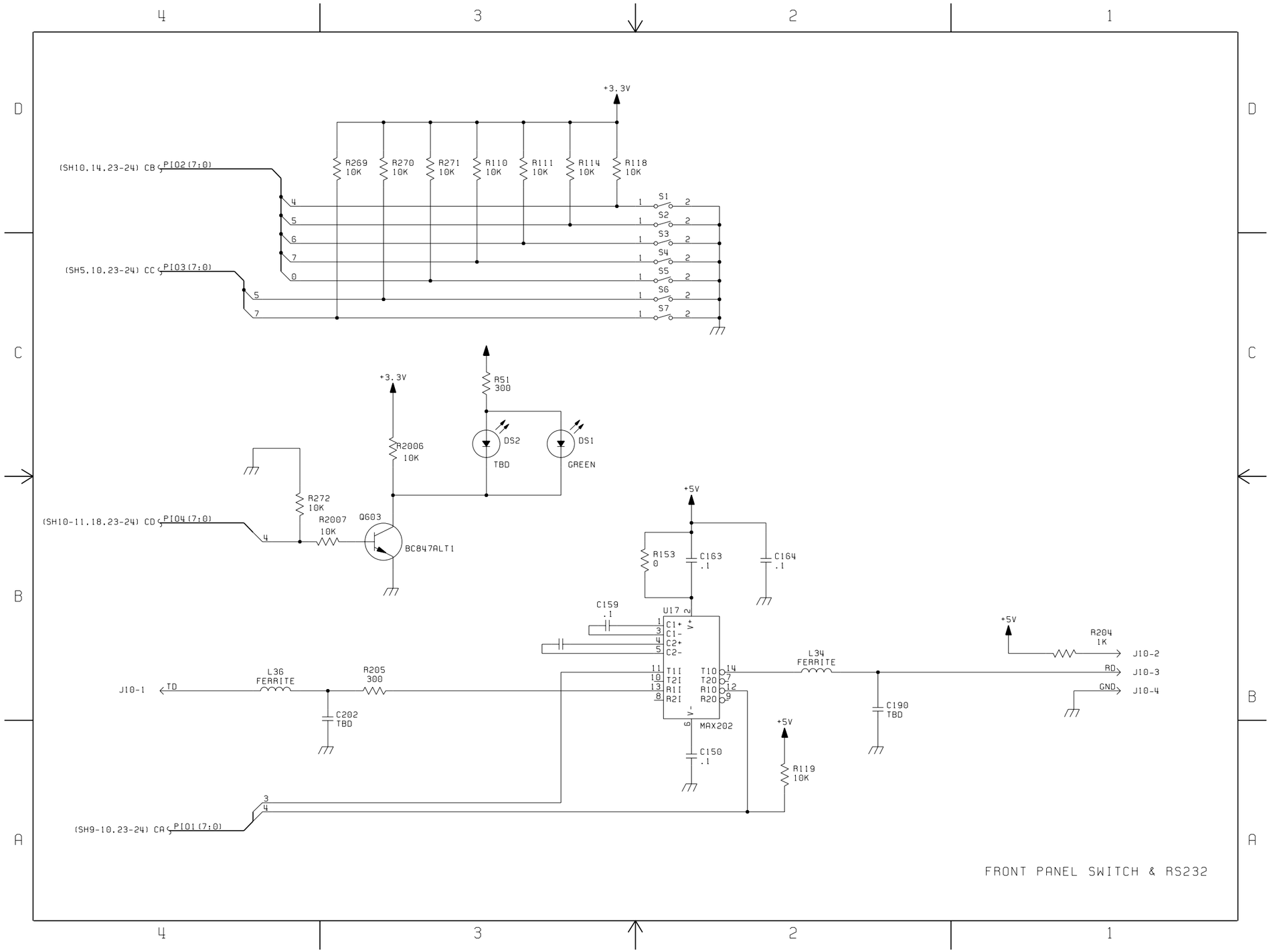

+3.3V
L25
FERRITE
C160 220PF
C131 .1
C138 .1
C122 .1
C123 .1
C132 .1
C141 .1
C157 .1
R141 4.7K
R132 4.7K
R130 4.7K
R140 4.7K
U13
VDD
VDDQ
VSS
VSSQ
MT48LC4M16
(SH10) BA EMI-SDRAM-CS0*
(SH10) AX EMI-RW
(SH10) AY EMI-SDRAM-CAS*
(SH10) BC EMI-SDRAM-RAS*
(SH10) AZ EMI-SDRAM-CLK
(SH10) BB EMI-SDRAM-LDQM
(SH10) BD EMI-SDRAM-UDQM
R131 33
C145 TBD
CS
WE
CAS
RAS
CKE
CLK
DQML
DQMH
BA0
BA1
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
(SH10.10-11) AT EMI-ADR(21:1)
(SH10.10-11) AU EMI-DATA(15:0)
EMI SDRAM


+3.3V
L12
FERRITE
C37 220PF
C36 .1
C40 .1
C43 .1
C48 .1
C51 .1
C41 .1
C46 .1
R18 4.7K
R22 4.7K
R24 4.7K
R23 4.7K
U7
VDD
VDDQ
(SH10) CT SMI-SDRAM-CS0*
(SH10) CY SMI-SDRAM-WE*
(SH10) CQ SMI-SDRAM-CAS*
(SH10) CW SMI-SDRAM-RAS*
R49 33
(SH10) CR SMI-SDRAM-CLK
(SH10) CV SMI-SDRAM-LDQM
(SH10) CX SMI-SDRAM-UDQM
(SH10) CS SMI-SDRAM-CLKIN
C52 TBD
CS
WE
CAS
RAS
CKE
CLK
DQML
DQMH
BA0
BA1
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
VSS
VSSQ
MT48LC4M16
(SH10) CP SMI-SDRAM-ADR(13:0)
(SH10) CU SMI-SDRAM-DATA(15:0)
SMI SDRAM

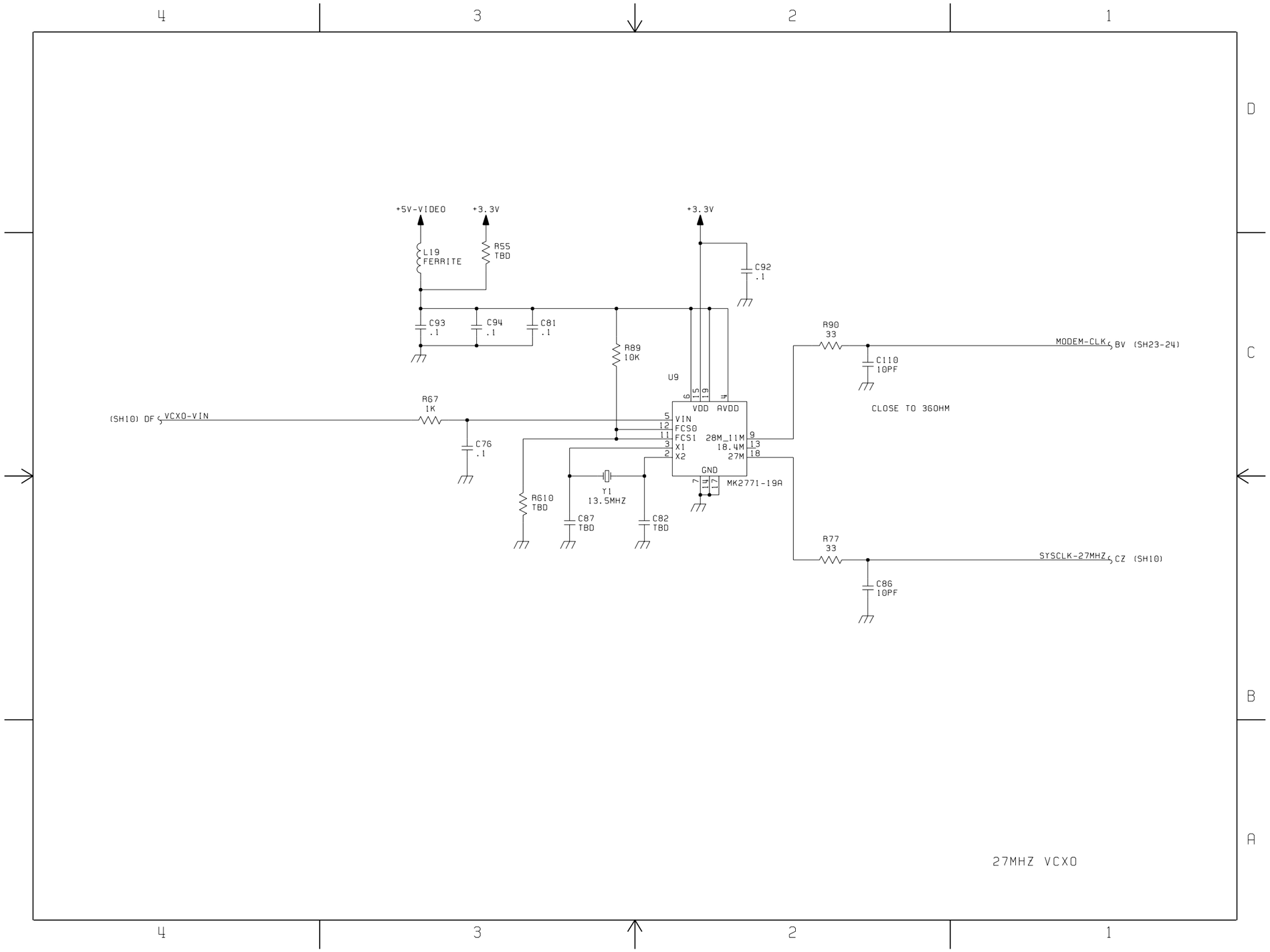

+3.3V
+5V
L41
FERRITE
L33
FERRITE
C184
10
16V
C195
.1
R212
10K
R217
10K
R201
4.7K
R203
10K
R211
10K
R210
10K
C216
.1
C213
.1
U26
VCC
VDD
VDDP
CMDVCC
RSTIN
I_OUC
PRES
5V_3V*
CLKDIV1
CLKDIV2
XTAL1
XTAL2
IO
RST
CLK
OFF
S1
S2
VUP
AUX1
AUX2
AUX1UC
AUX2UC
GND
CGND
PGND
TDA8004
C196
.1
C197
.1
C217
.1
C215
.1
R216
200
C211
TBD
R202
1K
R221
TBD
C223
.1
VPP
J12-6
VCC-VPP
J12-1
R225
100
R224
0
IO
J12-7
C228
TBD
R215
100
RST
J12-2
C222
TBD
R214
75.0
SC-CLK
J12-3
C227
TBD
GND
J12-5
C212
TBD
R209
200
C210
TBD
(SH10) BZ
PIO0(7:0)
SH10.16.23-24) CB
PIO2(7:0)
R199
10K
SC-DETECT
J12-9
SC-DETECT
J12-11
C192
TBD
DETECT
J12-10
R236
100
C238
TBD
SMART CARD INTERFACE

A BOARD SCHEMATIC DIAGRAM (14 OF 24)

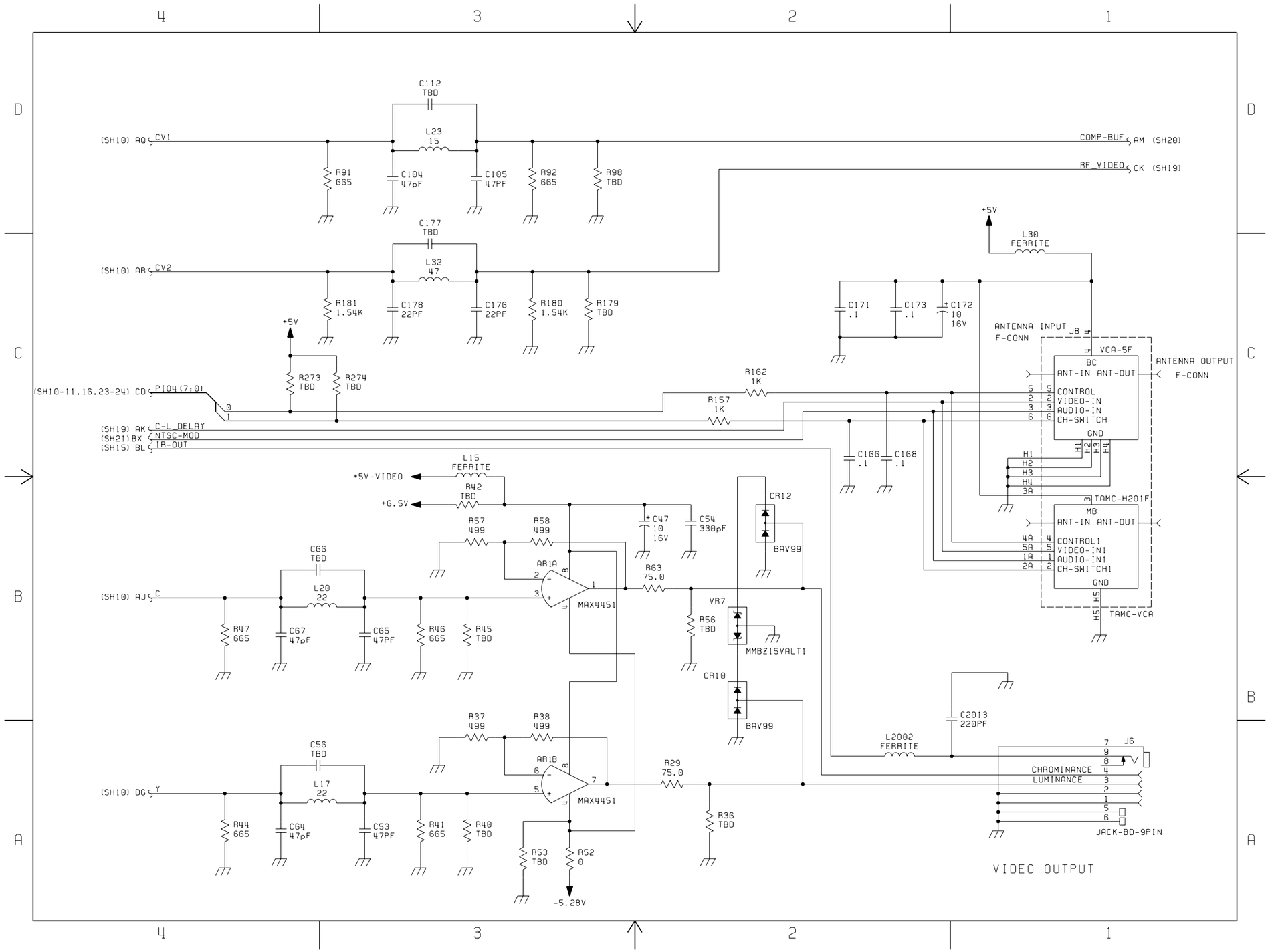



+3.3V
R269 10K
R270 10K
R271 10K
R110 10K
R111 10K
R114 10K
R118 10K
(SH10.14.23-24) CB
PIO2(7:0)
4
5
6
7
0
S1
S2
S3
S4
S5
S6
S7
(SH5.10.23-24) CC
PIO3(7:0)
5
7
+3.3V
R51 300
R2006 10K
DS2
TBD
DS1
GREEN
R272 10K
(SH10-11.18.23-24) CD
PIO4(7:0)
4
R2007 10K
Q603
BC847ALT1
+5V
R153 0
C163 .1
C164 .1
C159 .1
U17
C1+
C1-
C2+
C2-
T1I
T2I
R1I
R2I
T1O
T2O
R1O
R2O
MAX202
C150 .1
+5V
R119 10K
J10-1
TD
L36 FERRITE
R205 300
C202 TBD
L34 FERRITE
C190 TBD
+5V
R204 1K
J10-2
RD
J10-3
GND
J10-4
3
4
(SH9-10.23-24) CA
PIO1(7:0)
FRONT PANEL SWITCH & RS232

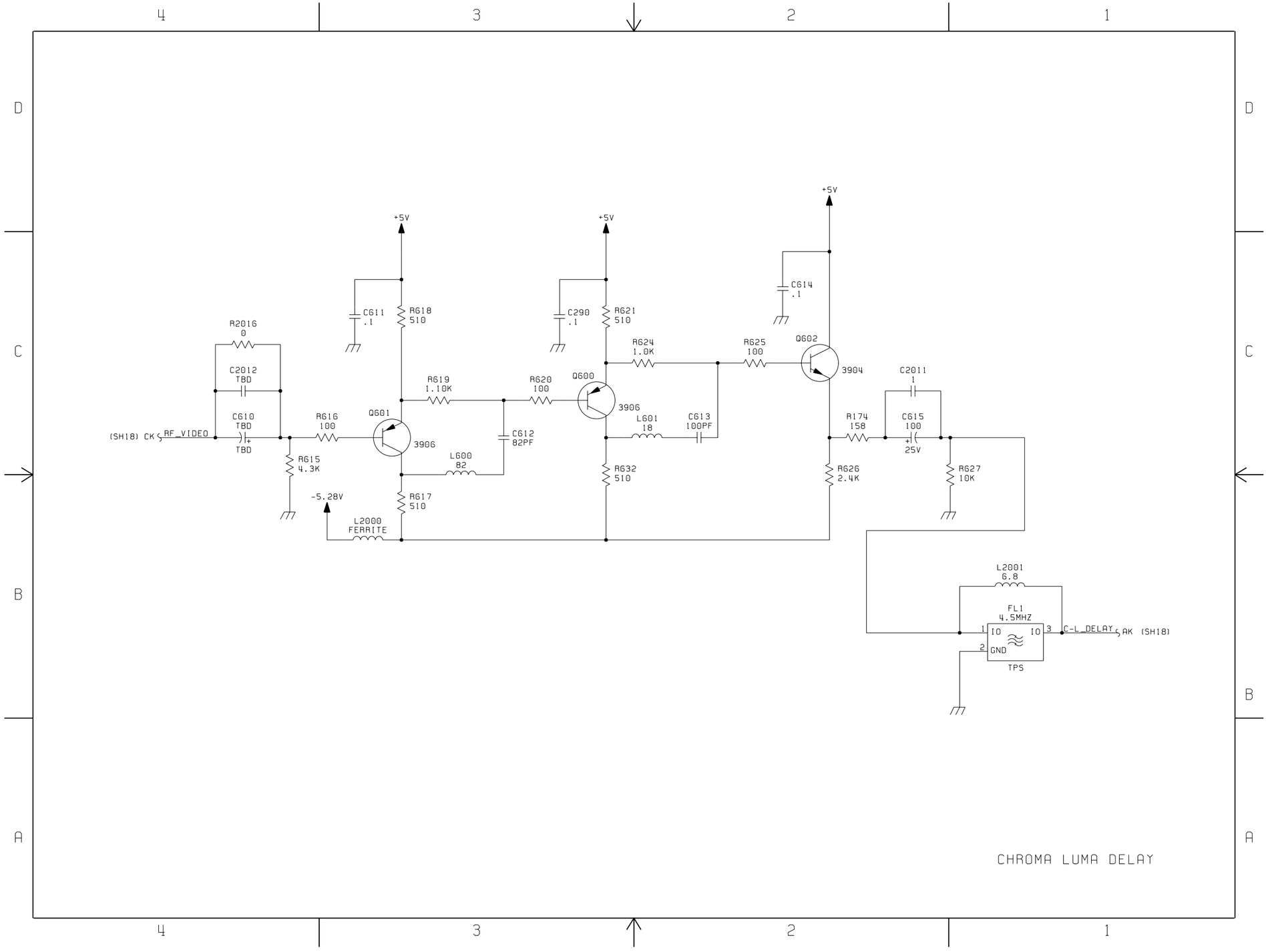
A BOARD SCHEMATIC DIAGRAM (16 OF 24)



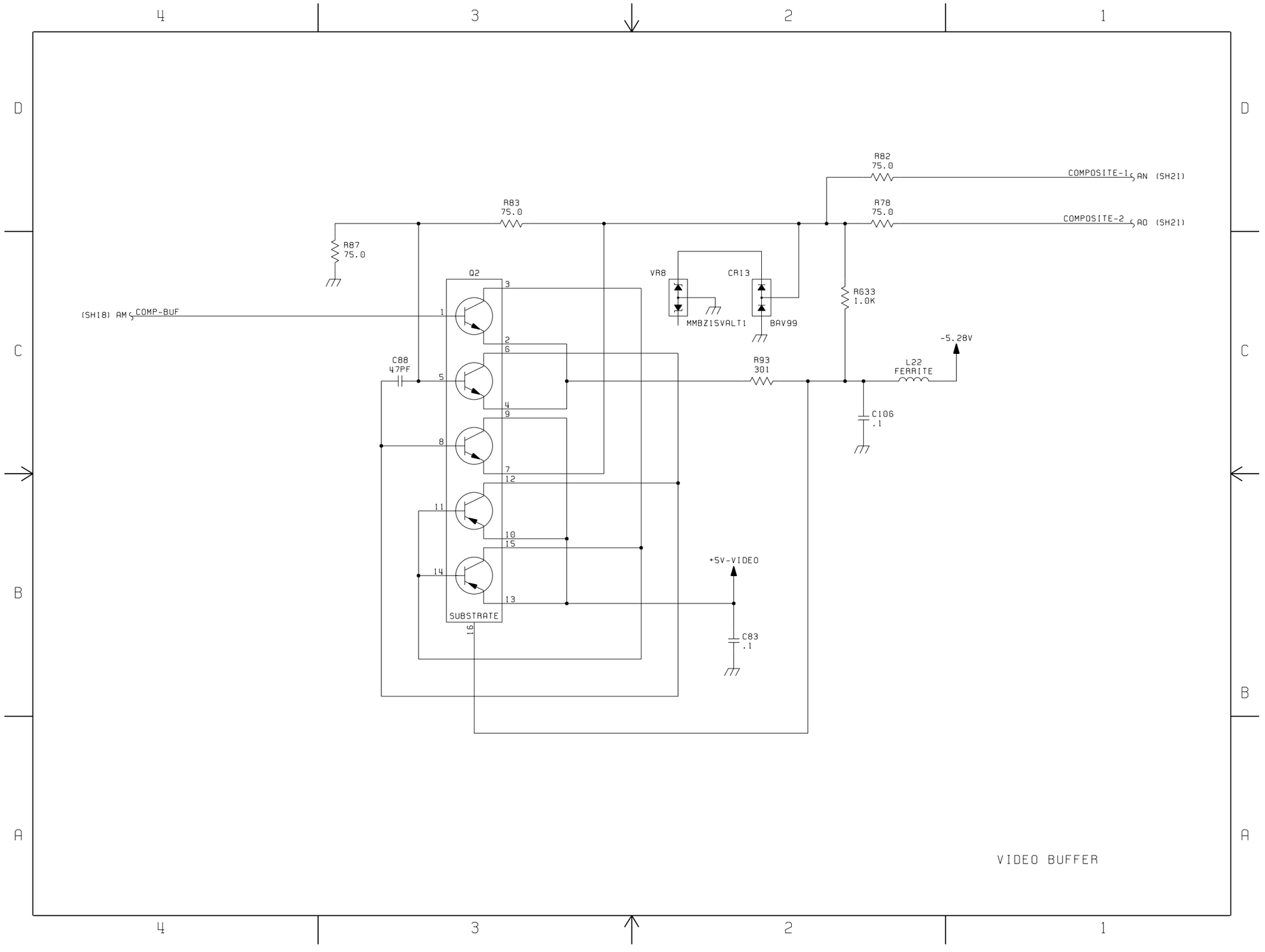
A BOARD SCHEMATIC DIAGRAM (17 OF 24)

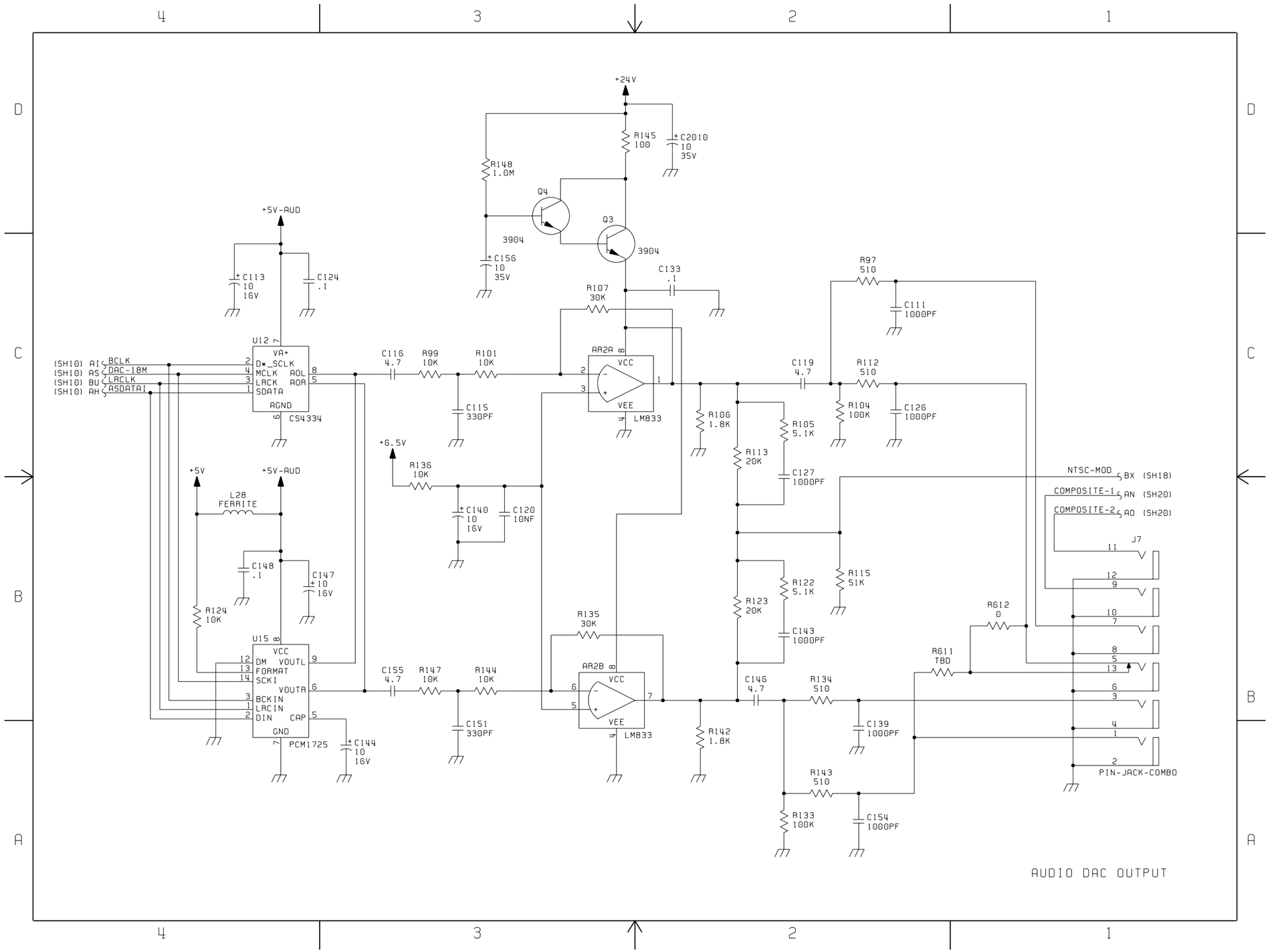


A BOARD SCHEMATIC DIAGRAM (18 OF 24)

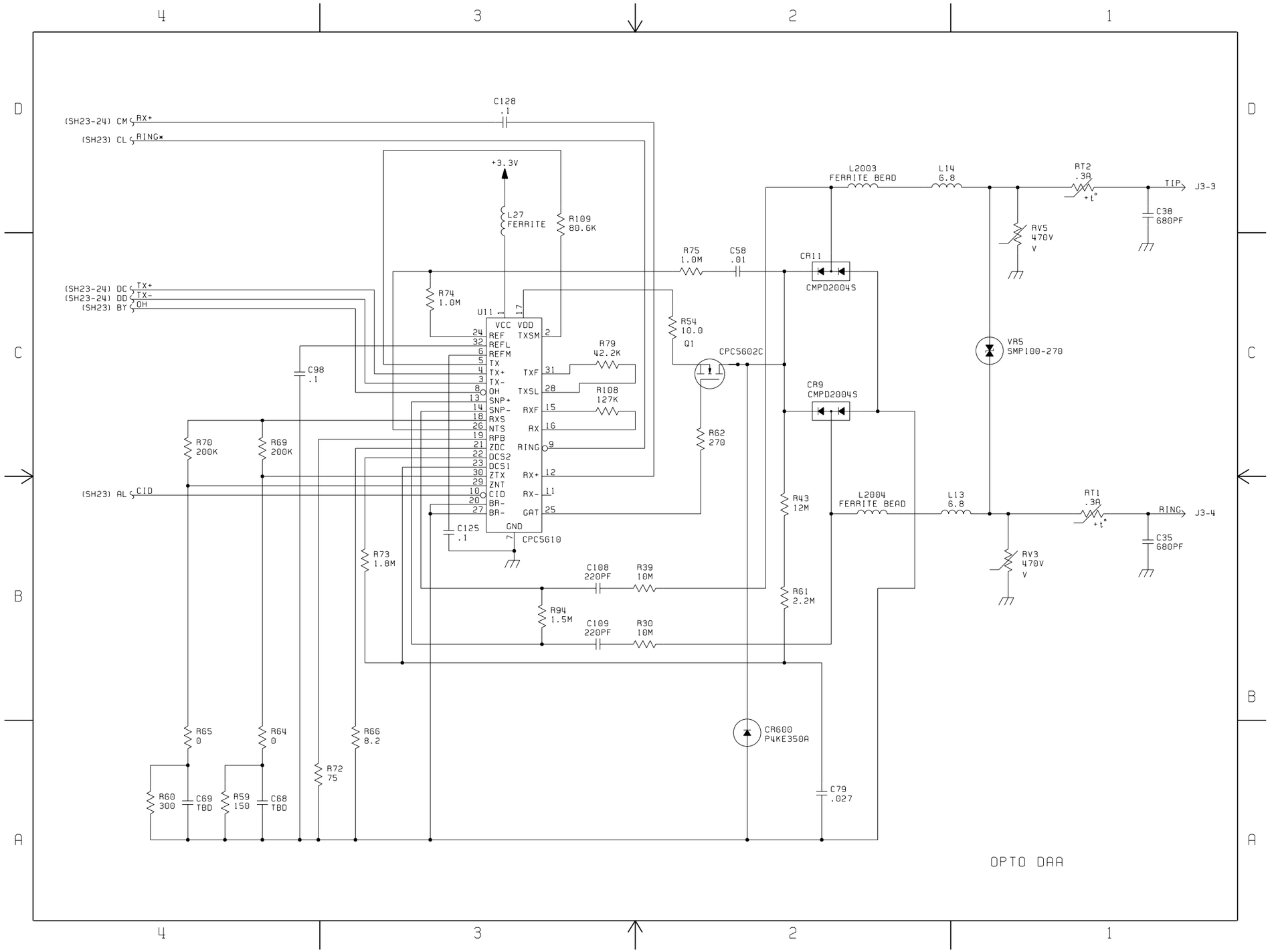


A BOARD SCHEMATIC DIAGRAM (19 OF 24)

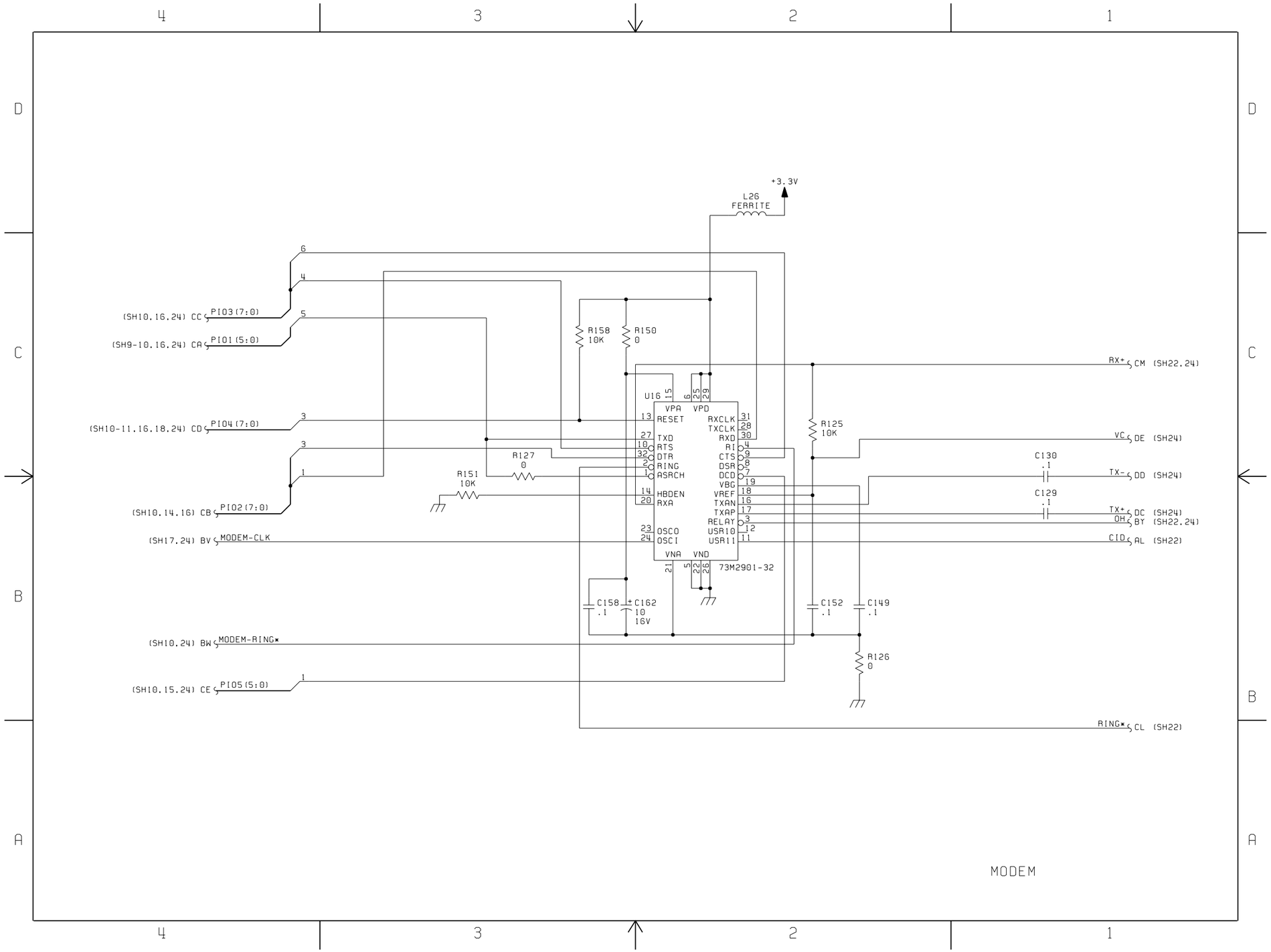



+24V
R145 100
C2010 10 35V
R148 1.0M
Q4
Q3
3904
3904
C156 10 35V
C133 .1
R107 30K
+5V-AUD
C113 10 16V
C124 .1
U12
VA+
D*_SCLK
MCLK
LRCK
SDATA
AGND
AOL
AOR
CS4334
(SH10) AI BCLK
(SH10) AS DAC-18M
(SH10) BU LRCLK
(SH10) AH ASDATAI
C116 4.7
R99 10K
R101 10K
C115 330PF
AR2A
VCC
VEE
LM833
R106 1.8K
R113 20K
C127 1000PF
R105 5.1K
C119 4.7
R97 510
C111 1000PF
R112 510
R104 100K
C126 1000PF
+6.5V
R136 10K
C140 10 16V
C120 10NF
+5V
+5V-AUD
L28 FERRITE
C148 .1
C147 10 16V
R124 10K
U15
VCC
DM
FORMAT
SCKI
VOUTR
BCKIN
LRCIN
DIN
GND
VOUTL
CAP
PCM1725
C144 10 16V
C155 4.7
R147 10K
R144 10K
C151 330PF
AR2B
VCC
VEE
LM833
R135 30K
R142 1.8K
R123 20K
R122 5.1K
C143 1000PF
R115 51K
C146 4.7
R134 510
C139 1000PF
R611 TBD
R612 0
R143 510
R133 100K
C154 1000PF
NTSC-MOD
COMPOSITE-1
COMPOSITE-2
BX (SH18)
AN (SH20)
AO (SH20)
J7
PIN-JACK-COMBO
AUDIO DAC OUTPUT

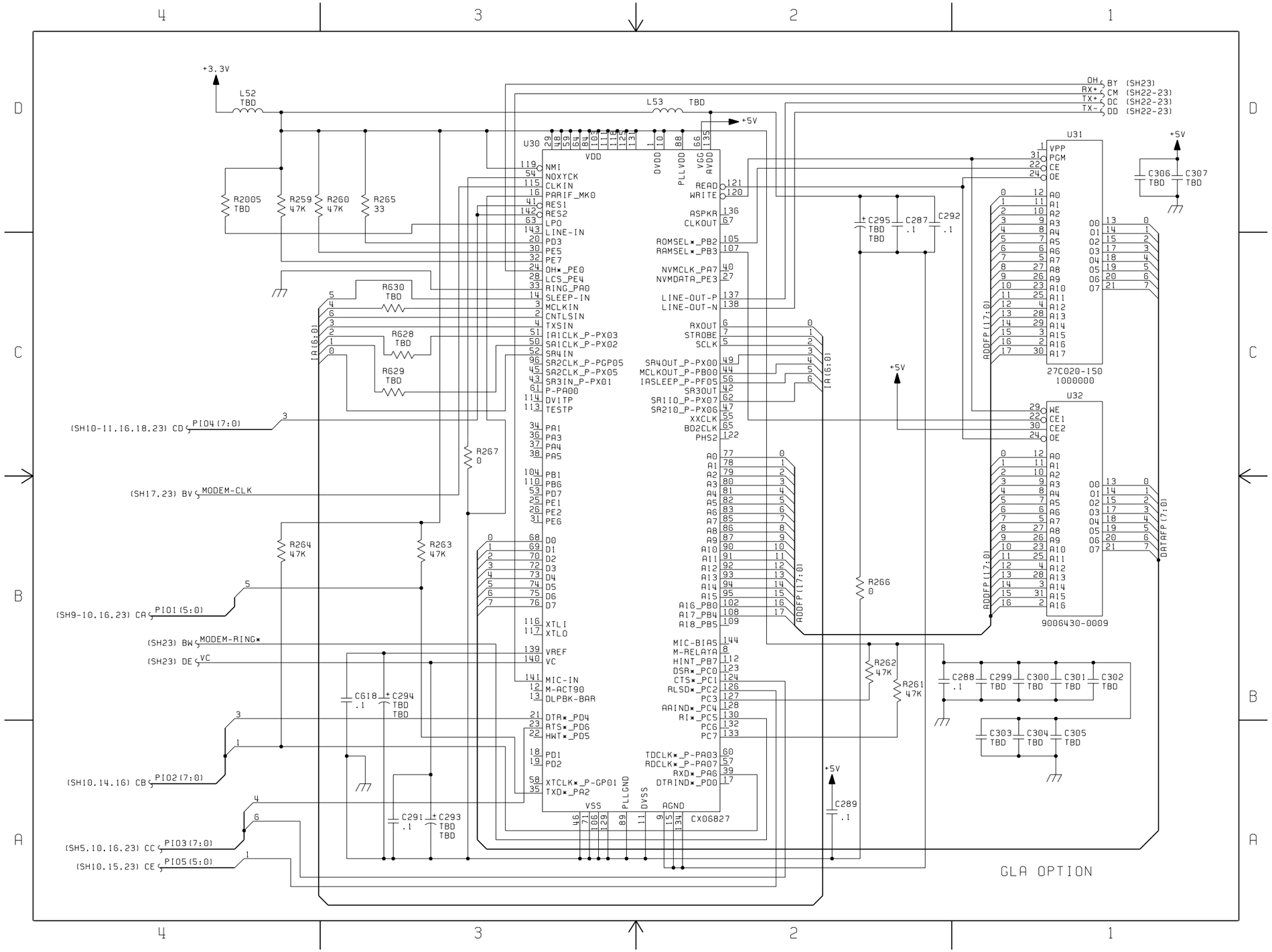
A BOARD SCHEMATIC DIAGRAM (21 OF 24)



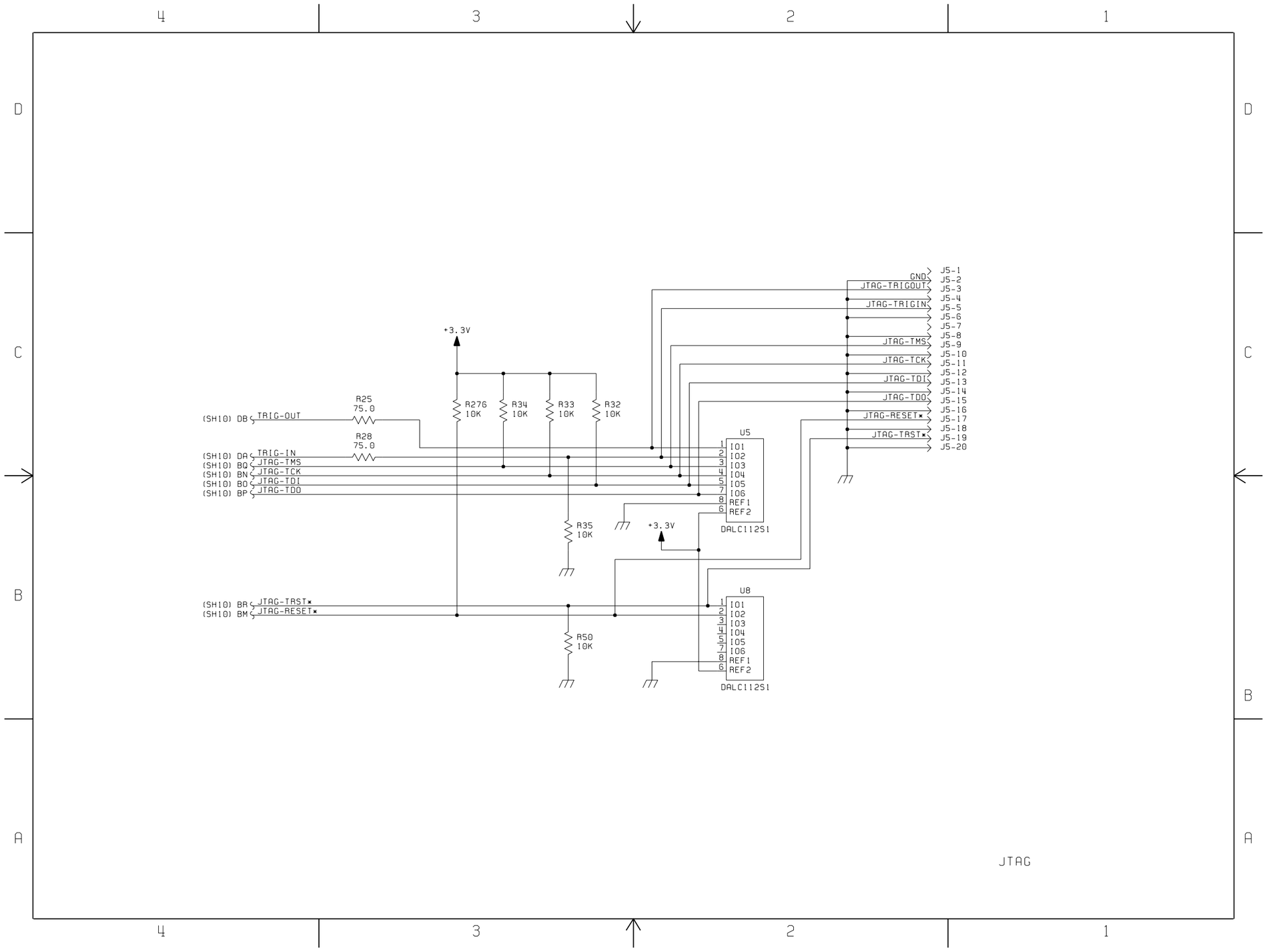
A BOARD SCHEMATIC DIAGRAM (22 OF 24)

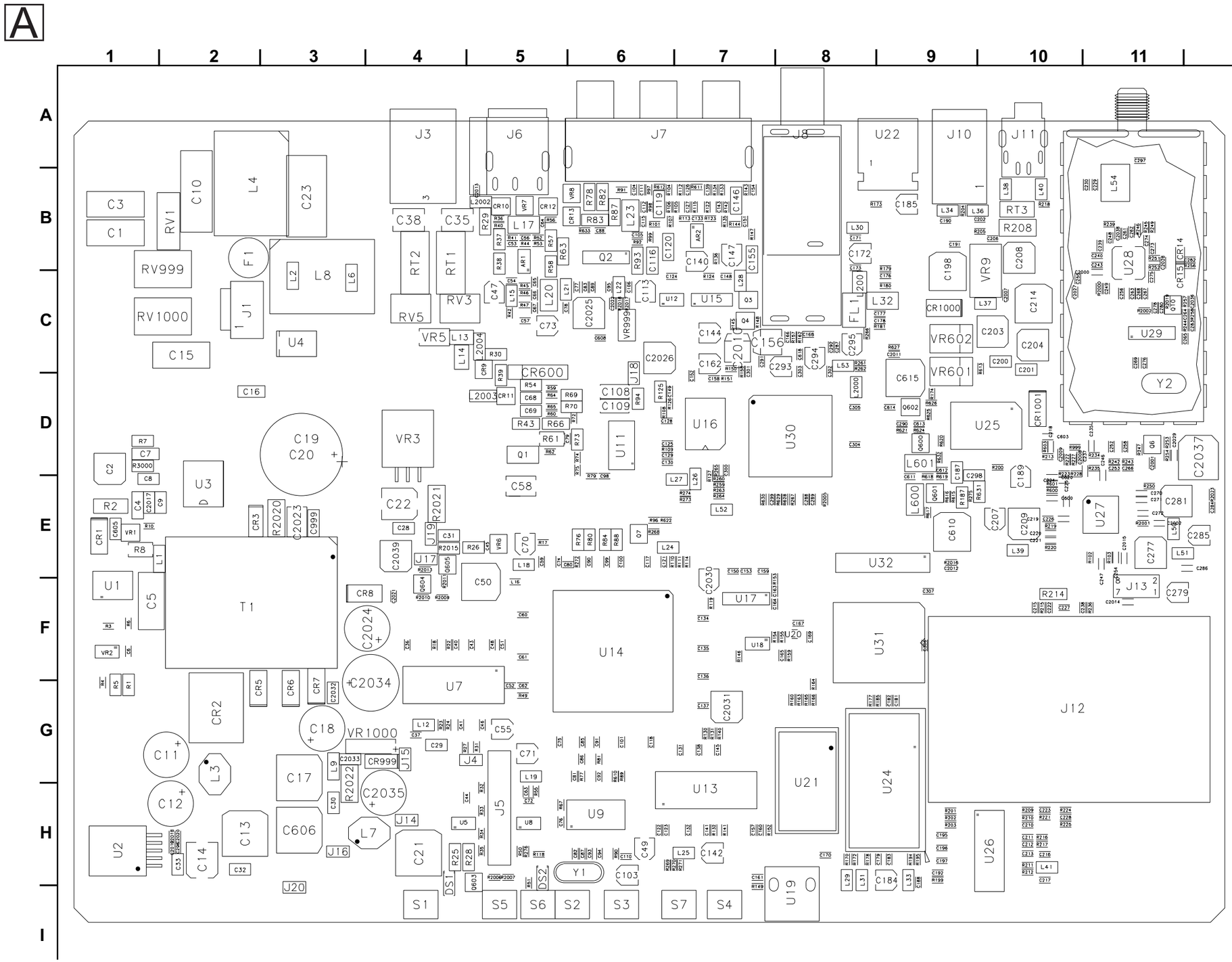


A BOARD SCHEMATIC DIAGRAM (23 OF 24)



A BOARD SCHEMATIC DIAGRAM (24 OF 24)




A
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J3
J6
J7
J8
U22
J10
J11
C3
C1
RV1
C10
L4
C23
RV999
F1
L2
L8
L6
RV1000
J1
U4
C15
C16
C38
C35
RT2
RT1
RV5
RV3
VR5
L13
L14
L2004
CR9
R30
R39
CR600
L2003
CR11
R54
C68
C69
R43
R66
R61
Q1
C58
C108
C109
U18
C2026
U11
U16
U30
C19
C20
VR3
C22
R2021
C28
C31
R2015
R26
VR6
C70
L18
C50
U17
C2030
U14
U7
C2024
C2034
CR8
CR2
CR5
CR6
CR7
C2032
C18
VR1000
C11
C12
L3
C17
C2033
CR999
U15
C2035
R2022
C30
C13
C606
C14
C32
U2
J16
L7
J14
C21
J20
U1
C5
T1
VR2
R3
R5
R1
R7
C7
R3000
C8
C2
C4
C2017
C9
U3
R2
CR1
C605
VR1
R10
R8
L1
CR3
R2020
C2023
C999
C2039
J17
Q604
Q605
R2013
R2011
#2010
#2009
#2008
R2007
J19
R2014
R2015
R25
R28
Q603
DS1
DS2
Y1
S1
S5
S6
S2
S3
S7
S4
J5
J4
U5
U8
U9
U13
U12
U15
Q3
Q4
Q2
C2025
VR999
C73
C47
L20
L21
C113
C116
C120
C140
C147
C155
C144
C201
C150
C162
C293
C294
C295
L53
C2000
C615
Q602
U25
L601
L600
Q601
C187
C298
R631
C189
C610
C207
C209
C219
C221
L39
U27
C281
C277
L51
C285
C286
U32
C2012
C2016
C2030
C150
C153
C159
C163
R155
U17
C134
C135
C136
C137
C2031
U18
U20
C109
C167
U14
U31
U21
U24
U13
U26
J12
C2037
C2038
C2039
C2040
C2041
C2042
C2043
C2044
C2045
C2046
C2047
C2048
C2049
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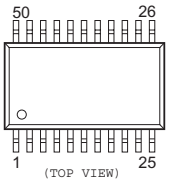
C2076

2-3. SEMICONDUCTORS

MN4SV17165BT-12



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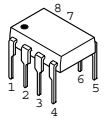
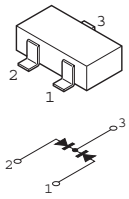
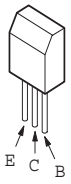


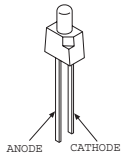
DAN202K



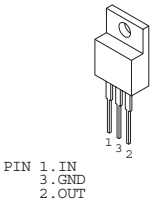
2SD774-34



SLR-325MCT31
SLR-325DCA47
SLR-325VRT31



TA7805S



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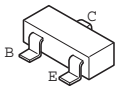
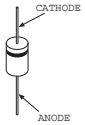
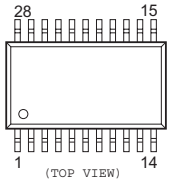


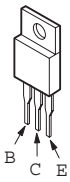
S2LA20F



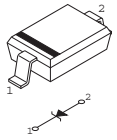
MN150414SA1



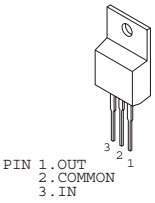
2SD2394-EF



UDZ-TE-17-6.8B



NJM78M05FA



AT24C64N-10SC
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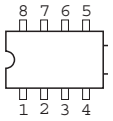
MC14577CF



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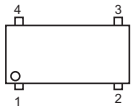

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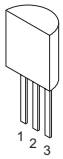

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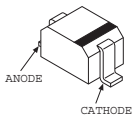

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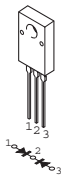

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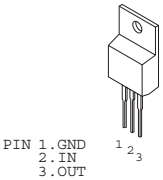

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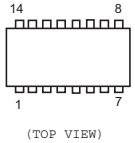

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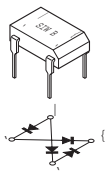

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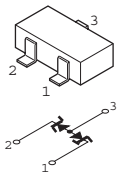

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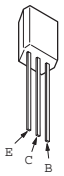


SECTION 3: EXPLODED VIEWS

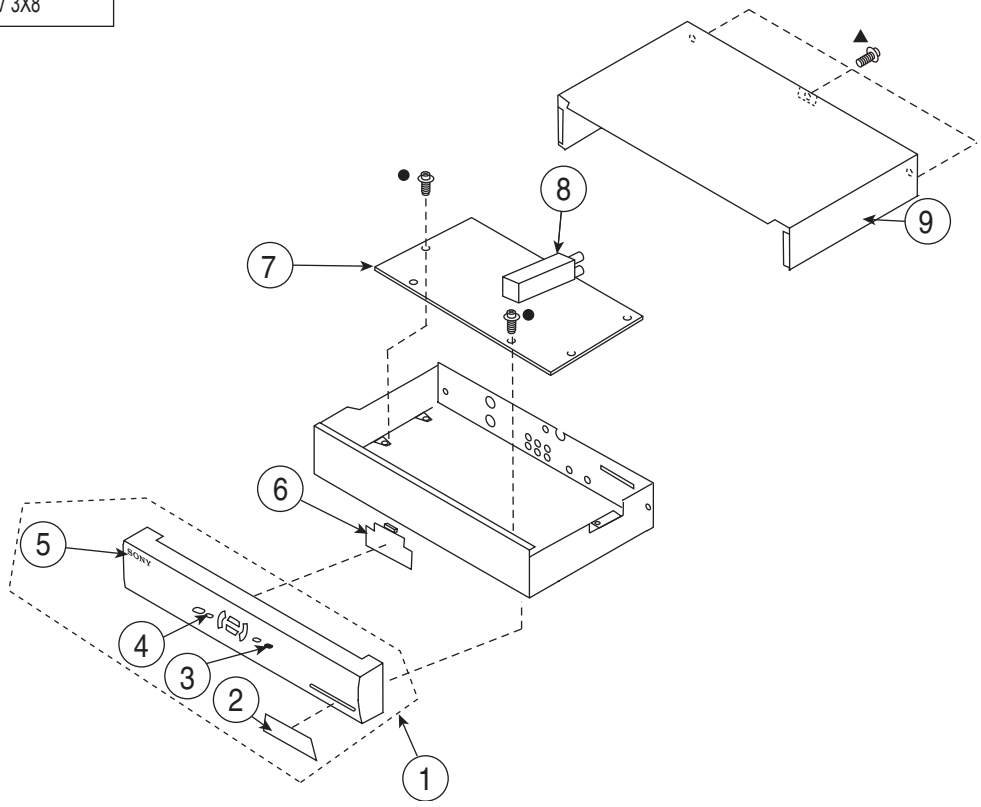
Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

3-1. CHASSIS

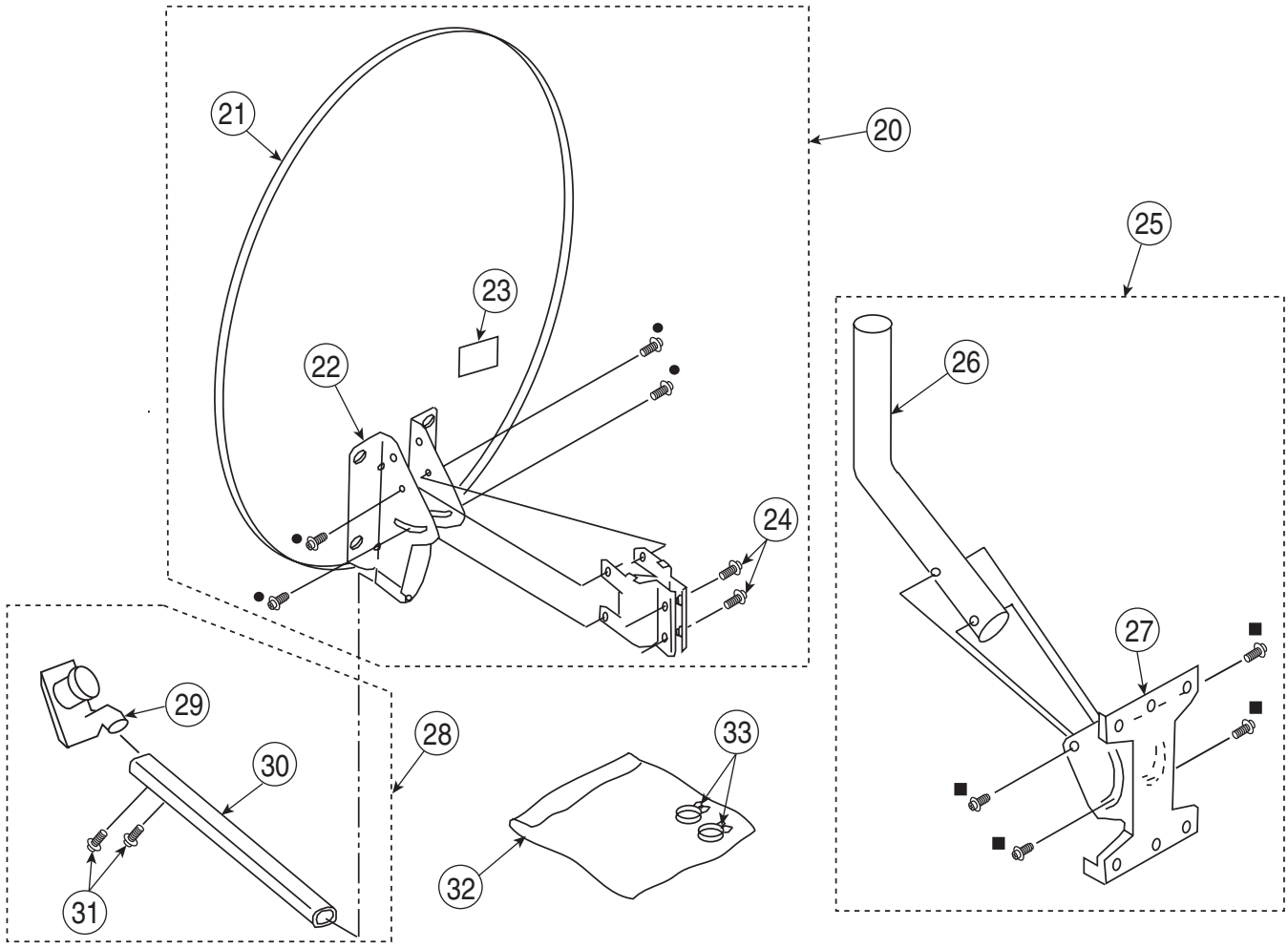
● 7-685-871-01 SCREW +BVTT 3X6
▲ 7-685-646-79 SCREW +BV 3X8



REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
1	X-4040-392-1	PANEL ASSY, FRONT (SAT-A65/A65A ONLY)	(2-5)
1	X-4040-391-1	PANEL ASSY, FRONT (SAT-B65/B65A ONLY)	(2-5)
2	4-085-699-12	DOOR (SAT-A65/A65A ONLY)	
2	4-085-699-02	DOOR (SAT-B65/B65A ONLY)	
3	4-085-696-02	GUIDE, IR	
4	4-085-697-02	GUIDE, LED	
5	4-062-173-21	EMBLEM, SONY (4-A) (SAT-A65/A65A ONLY)	
5	4-062-173-01	EMBLEM, SONY (4-A) (SAT-B65/B65A ONLY)	
6	4-085-695-11	BUTTON, MULTI (SAT-A65/A65A ONLY)	
6	4-085-695-01	BUTTON, MULTI (SAT-B65/B65A ONLY)	
* 7	1-761-600-11	A BOARD, MOUNTED (SAT-A65/A65A ONLY)	
* 7	1-761-601-11	A BOARD, MOUNTED (SAT-B65/B65A ONLY)	
8	9-885-023-43	TUNER, ASSY	
* 9	4-086-990-01	CASE, UPPER (SAT-A65/A65A ONLY)	
* 9	4-086-990-11	CASE, UPPER (SAT-B65/B65A ONLY)	

3-2. SAN-18D5

● 4-061-581-01 BOLT, 1/4-20 UNC X 1/2 FORMING
■ 4-061-591-01 BOLT, 1/4-20 UNC X 1/2



REF.NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
20	X-4035-039-2	MOUNT ASSY, REFLECTOR	(21-24)
21	4-061-583-01	REFLECTOR	
22	4-061-584-01	REFLECTOR, MOUNTING BASE	
23	4-061-576-11	LABEL MODEL NUMBER	
24	4-061-587-01	BOLT 1/4-20 UNC X 7/8	
25	X-4035-030-1	MOUNT ASSY, UNIVERSAL	(26-27)
26	4-061-588-01	MAST, UNIVERSAL MOUNT	
27	4-061-589-01	FOOT, UNIVERSAL MOUNT	
28	X-4035-040-2	ARM ASSY, LNB	(29-31)
29	1-251-842-11	LOW NOISE FILTER	
30	4-061-590-01	ARM, LNB SUPPORT	
31	4-061-592-01	SCREW, ROUND SEMS	
32	4-049-203-01	COVER, WATERPROOF	
33	4-049-478-01	CLIP (L)	

SECTION 4: ELECTRICAL PARTS LIST

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

When ordering parts by reference number, please include the board name.

A

RESISTORS
- All resistors are in ohms
- F : nonflammable
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

A65/A65A

*** 1-761-600-11 A BOARD, MOUNTED**

REF. NO.	SONY P/N	PART DESCRIPTION
	9-885-023-91	PWB,GAITHER MPG-2
DS1	9-885-023-90	LED,CHIP GRN
J1	9-885-023-89	HEADER ASSY,7.92MM 2 POS
U16	9-885-023-88	IC,MODEM SINGLE CHIP 2.4KBPS
U4	9-885-023-87	BRIDGE RECTIFIER,1A,800V
C92,C94,C111,C124,C126,C127, C139,C143,C154,C190,C240,C249, C256,C262,C263,C264,C274,C275, C278,C282,C283,C2001,C2007,C2027	9-885-023-86	CAP,X7R 10% 1000PF 50V
Q3,Q4,Q602	9-885-023-85	TRANSISTOR,NPN
U3	9-885-023-84	IC,SMPS PRIMARY
Y1,C181,C183,C188,C191,C195, C196,C197,C206,C213,C215,C216, C217,C218,C220,C223,C224,C225, C235,C237,C239,C246,C248,C252, C258,C270,C271,C272,C286,C290, C600,C603,C608,C611,C614,C620, C2002,C2018,C2019,C2020,C2021, C2022,C2029,C296,C618	9-885-023-83	CRYSTAL,HC49/U,13.5MHZ W3rd OT Screened
J10	9-885-023-82	CONN,MDLR JK 4P-4C
S1,S2,S3,S4,S5,S6,S7	9-885-023-81	SWITCH,LIGHT TOUCH 6X6X5MM
AR2	9-885-023-80	IC,DUAL AUDIO OP AMP SMT
U19	9-885-023-79	MODULE,INFRARED REMOTE RCVR 40KHZ
VR9	9-885-023-78	IC,REG 5V .5A 1% V-LOW DROP
U22	9-885-023-77	FIBER OPTIC TX MODULE 6MB/S
U24	9-885-023-76	PD,GAITHER MPG DTV STLTE RCVR
J6	9-885-023-75	JACK BOARD,DIN/3.5MM PHONE
L12,L15,L18,L19,L21,L22,L25,L26, L27,L28,L29,L30,L31,L33,L34, L36,L37,L39,L41,L2000,L2002	9-885-023-74	FILTER,FERRITE CHIP 600OHM .5A
J3	9-885-023-73	CONN,MDLR JK RJ11 6/2-POS
U7,U13	9-885-023-72	IC,DRAM,SYNC,1MX16X4,133MHZ
RT3	9-885-023-71	CIRCUIT PROTECTOR,0.10A/60V

A65/A65A

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*** 1-761-600-11 A BOARD, MOUNTED**

REF. NO.	SONY P/N	PART DESCRIPTION
VR5	9-885-023-70	ARRESTOR,TRANSIENT SURGE,370V
FL1	9-885-023-69	FILTER,BAND REJECT 4.5MHZ
CR3	9-885-023-68	DIODE,RECT SUPER-FAST 600V 1A SMB
Q2	9-885-023-67	IC,TRANSISTOR ARRAY 3 NPN/2PNP
Q1	9-885-023-66	FET,N CHAN LITELINK 350V 8-OHM
VR7,VR8	9-885-023-65	DIODE,DUAL,TVS,COMM ANODE,15V
J11	9-885-023-64	CONN,PHONE JACK 2.5MM R/A
VR6	9-885-023-63	DIODE,DUAL,TVS,COMM ANODE,5.6V
U26	9-885-023-62	IC,SMART CARD INTERFACE
AR1	9-885-023-61	IC,OP AMP,DUAL RAIL-RAIL 210MHZ
CR9,CR11	9-885-023-60	DIODE,DUAL SWITCHING 300V
U11	9-885-023-59	IC,OPTICAL DAA 56K 2.7-5.5V
CR10,CR12,CR13	9-885-023-58	DIODE ARRAY,DUAL SWITCHING
L1,L2,L6,L9	9-885-023-57	FILTER,FERRITE CHIP 3A 1206
Y2	9-885-023-56	CRYSTAL,HC49,4.000MHZ,30PPM
U25	9-885-023-55	IC,LNB VOLTAGE REGULATOR
Q6,Q7,Q10,Q603,Q604,Q605	9-885-023-54	TRANSISTOR,NPN,GEN PURPOSE
J7	9-885-023-53	JACK BOARD,RCA,R/A,6POS
VR3	9-885-023-52	IC,REG LINEAR LOW-DROP .5A 5V
U27	9-885-023-51	IC,DEMOD DSS QPSK/BPSK 3.3V
U14	9-885-023-50	IC,SET-TOP BOX DECODER 60MHZ
U2	9-885-023-49	IC,REG LIN 2.5V 3A LOW DROPOUT
U28	9-885-023-48	IC,TUNER,INTEGRATED DBS 5V
U29	9-885-023-47	IC,SYNTHESIZER 2.7GHZ I2C-BUS
L3	9-885-023-46	INDUCTOR,2.5UH 20% 3.5A
L7	9-885-023-45	INDUCTOR,4.44UH 20% 2.2A
R8	9-885-023-44	RESISTOR,1210 1/4W 5% 20 OHM
	9-885-023-43	TUNER ASSY
	9-885-023-42	COVER,TUNER
J12	9-885-023-41	READER, SMART CARD
J8	9-885-023-40	3/4 RF MODULATOR
RV3,RV5	9-885-023-39	VARISTOR,470VDC 1750A
RT1,RT2	9-885-023-38	CIRC PROT,PTC 3A 600V
U17	9-885-023-37	IC,XCVR +5V RS-232 15KESD
U9	9-885-023-36	IC,VCXO/CLK SOURCE
U12	9-885-023-35	IC,DAC,STEREO,24BIT,96KHZ
VR2	9-885-023-34	IC,ADJ POS SHUNT REG 1% W/REF
T1	9-885-023-33	TRANSFORMER,FLYBACK GAITHER
Q600,Q601	9-885-023-32	TRANSISTOR PNP SMD
RV1	9-885-023-31	VARISTOR,240VRMS 2500A
U20	9-885-023-30	IC,RESET 2.93V
U1	9-885-023-29	OPTOISOLATOR,UL DBLPROT

A65/A65A

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*** 1-761-600-11 A BOARD, MOUNTED**

REF. NO.	SONY P/N	PART DESCRIPTION
CR1,CR5,CR6,CR7,CR8	9-885-023-28	DIODE,RECT ULTRA-FAST 200V 2A SMB
C20	9-885-023-27	CAP,ALUM 100UF 20% 250V 85C
CR2	9-885-023-26	DIODE,SCHOTTKY 20A 40V SMT
VR601,VR602	9-885-023-25	TRANSIENT VOLTAGE SUPPR 20V
R2	9-885-023-24	RESISTOR,2010 1/2W 5% 39
VR999	9-885-023-23	IC,REGULATOR NEG ADJ 1A
VR1	9-885-023-22	DIODE,ZENER 2.4V 5%
L13,L14	9-885-023-21	INDUCTOR,CHIP 6.8UH 20%
F1	9-885-023-20	FUSE,RADIAL 2.5A 250V TIME-LAG
VR1000	9-885-023-19	IC,REG 24V 1.5A LOW DROPOUT
CR999	9-885-023-18	DIODE,REC 1A 200V FAST LO-LOSS
L2003,L2004	9-885-023-17	FILTER,FERRITE CHIP .3A 2K 1206
C10,C23	9-885-023-16	ALT SOURCE LIST CAP,FILM SUPPRX2 .22UF
CR1000,CR1001	9-885-023-15	DIODE,SCHOTTKY REC 2A 60V SMB

B65/B65A

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*** 1-761-601-11 A BOARD, MOUNTED**

REF. NO	SONY P/N	PART DESCRIPTION
	9-885-023-92	PWB, GAITHER MOTHERBOARD
DS1	9-885-023-93	LED,CHIP GRN
J1	9-885-023-94	HEADER ASSY,7.92MM 2 POS
U16	9-885-023-95	IC,MODEM SINGLE CHIP 2.4KBPS
U4	9-885-023-96	BRIDGE RECTIFIER,1A,800V
C80,C92,C94,C124,C126, C127,C143,C154,C190,C240, C249,C256,C262,C263,C264, C274,C275,C278,C282,C283, C2001,C2007,C2027	9-885-023-97	CAP,X7R 10% 1000PF 50V
Q3,Q4,Q602	9-885-023-98	TRANSISTOR,NPN
U3	9-885-023-99	IC,SMPS PRIMARY
Y1	9-885-024-00	CRYSTAL,HC49/U,13.5MHZ W3rd OT Screened
S1,S2,S3,S4,S5,S6,S7	9-885-024-01	SWITCH,LIGHT TOUCH 6X6X5MM
AR2	9-885-024-02	IC,DUAL AUDIO OP AMP SMT
U19	9-885-024-03	MODULE,INFRARED REMOTE RCVR 40KHZ
VR9	9-885-024-04	IC,REG 5V .5A 1% V-LOW DROP
U24	9-885-024-05	PD,GAITHER MPG DTV STLTE RCVR
J6	9-885-024-06	CONN,RCPT,CIRC DIN,R/A,4POS
L12,L15,L18,L19,L21,	9-885-024-07	FILTER,FERRITE CHIP 600OHM .5A
J3	9-885-024-08	CONN,MDLR JK RJ11 6/2-POS
U7,U13	9-885-024-09	IC,DRAM,SYNC,1MX16X4,133MHZ
VR5	9-885-024-10	ARRESTOR,TRANSIENT SURGE,370V
FL1	9-885-024-11	FILTER,BAND REJECT 4.5MHZ
CR3	9-885-024-12	DIODE,RECT SUPER-FAST 600V 1A SMB
Q2	9-885-024-13	IC,TRANSISTOR ARRAY 3 NPN/2PNP
Q1	9-885-024-14	FET,N CHAN LITELINK 350V 8-OHM
VR7,VR8	9-885-024-15	DIODE,DUAL,TVS,COMM ANODE,15V
VR6	9-885-024-16	DIODE,DUAL,TVS,COMM ANODE,5.6V
U26	9-885-024-17	IC,SMART CARD INTERFACE
AR1	9-885-024-18	IC,OP AMP,DUAL RAIL-RAIL 210MHZ
CR9,CR11	9-885-024-19	DIODE,DUAL SWITCHING 300V
U11	9-885-024-20	IC,OPTICAL DAA 56K 2.7-5.5V
CR10,CR12,CR13	9-885-024-21	DIODE ARRAY,DUAL SWITCHING
L1,L2,L6,L9	9-885-024-22	FILTER,FERRITE CHIP 3A 1206
Y2	9-885-024-23	CRYSTAL,HC49,4.000MHZ,30PPM
U25	9-885-024-24	IC,LNB VOLTAGE REGULATOR
Q6,Q7,Q10,Q603	9-885-024-25	TRANSISTOR,NPN,GEN PURPOSE
J7	9-885-024-26	JACK BOARD,RCA,R/A,3POS
VR3	9-885-024-27	IC,REG LINEAR LOW-DROP .5A 5V
U27	9-885-024-28	IC,DEMOD DSS QPSK/BPSK 3.3V
U14	9-885-024-29	IC,SET-TOP BOX DECODER 60MHZ
U2	9-885-024-30	IC,REG LIN 2.5V 3A LOW DROPOUT
U28	9-885-024-31	IC,TUNER,INTEGRATED DBS 5V
U29	9-885-024-32	IC,SYNTHESIZER 2.7GHZ I2C-BUS

B65/B65A

*** 1-761-601-11 A BOARD, MOUNTED**

REF. NO	SONY P/N	PART DESCRIPTION
L3	9-885-024-33	INDUCTOR,2.5UH 20% 3.5A
L7	9-885-024-34	INDUCTOR,4.44UH 20% 2.2A
R8	9-885-024-35	RESISTOR,1210 1/4W 5% 20 OHM
	9-885-024-36	TUNER ASSY
	9-885-024-37	COVER,TUNER
J12	9-885-024-38	READER, SMART CARD
J8	9-885-024-39	3/4 RF MODULATOR
RV3,RV5	9-885-024-40	VARISTOR,470VDC 1750A
RT1,RT2	9-885-024-41	CIRC PROT,PTC 3A 600V
U9	9-885-024-42	IC,VCXO/CLK SOURCE
U12	9-885-024-43	IC,DAC,STEREO,24BIT,96KHZ
VR2	9-885-024-44	IC,ADJ POS SHUNT REG 1% W/REF
T1	9-885-024-45	TRANSFORMER,FLYBACK GAITHER
Q600,Q601	9-885-024-46	TRANSISTOR PNP SMD
RV1	9-885-024-47	VARISTOR,240VRMS 2500A
U20	9-885-024-48	IC,RESET 2.93V
U1	9-885-024-49	OPTOISOLATOR,UL DBLPROT
CR1,CR5,CR6,CR7,CR8,	9-885-024-50	DIODE,RECT ULTRA-FAST 200V 2A SMB
C20	9-885-024-51	CAP,ALUM 100UF 20% 250V 85C
CR2	9-885-024-52	DIODE,SCHOTTKY 20A 40V SMT
VR601,VR602	9-885-024-53	TRANSIENT VOLTAGE SUPPR 20V
R2	9-885-024-54	RESISTOR,2010 1/2W 5% 39
VR999	9-885-024-55	IC,REGULATOR NEG ADJ 1A
VR1	9-885-024-56	DIODE,ZENER 2.4V 5%
L4	9-885-024-57	FILTER,AC LINE 20MH
F1	9-885-024-58	FUSE,RADIAL 2.5A 250V TIME-LAG
VR1000	9-885-024-59	IC,REG 24V 1.5A LOW DROPOUT
CR999	9-885-024-60	DIODE,REC 1A 200V FAST LO-LOSS
L2003,L2004	9-885-024-61	FILTER,FERRITE CHIP .3A 2K 1206
C10,C23	9-885-024-62	ALT SOURCE LIST CAP,FILM SUPPRX2 .22UF
CR1000,CR1001	9-885-024-63	DIODE,SCHOTTKY REC 2A 60V SMB

REF.NO.	PART NO.	DESCRIPTION	VALUES
		ACCESSORIES AND PACKAGING	
	1-754-235-11	ANTENNA, RF	
		(SAT-A65/A65A ONLY)	
*	4-086-019-01	BAG, PROTECTION	
	1-769-758-11	CABLE, MODULAR (WITH PLUG)	
*	4-085-701-11	CARTON	
		(SAT-A65/A65A ONLY)	
*	4-085-701-01	CARTON	
		(SAT-B65/B65A ONLY)	
	1-823-364-21	CORD, CONNECTION	
		(SAT-A65/A65A ONLY)	
	1-757-042-12	CORD, CONNECTION (AV)	
	1-558-226-32	CORD, CONNECTION (COAXIAL)	
	1-782-576-12	CORD, CONNECTION (S-VIDEO)	
		(SAT-A65/A65A ONLY)	
*	4-085-702-01	CUSHION	
	1-790-953-22	IR BLASTER	
		(SAT-A65/A65A ONLY)	
	4-085-845-11	MANUAL, INSTRUCTION	
		(SAT-A65/B65 ONLY)	
	4-089-401-11	MANUAL, INSTRUCTION	
		(SAT-A65A/B65A ONLY)	

REF.NO.	PART NO.	DESCRIPTION	VALUES
		REMOTE COMMANDER	
	1-476-462-11	REMOTE COMMANDER (RM-Y807)	
		(SAT-A65/A65A ONLY)	
	4-081-888-01	BATTERY COVER (FOR RM-Y807)	
		(SAT-A65/A65A ONLY)	
	1-477-065-11	REMOTE COMMANDER (RM-Y812)	
		(SAT-B65/B65A ONLY)	
	4-978-977-01	BATTERY COVER (FOR RM-Y812)	
		(SAT-B65/B65A ONLY)	

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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SONY

4-089-401-11

DIRECTV®
Digital Satellite Receiver

Operating Instructions

Before you begin using your Digital Satellite Receiver for the first time, follow the instructions in "Getting Started" on pages 1-6.

Also, make sure your Satellite Dish Antenna has been properly installed and call your service provider to begin service: DIRECTV: 1-800-DIRECTV (347-3288)

SAT-A65A
SAT-B65A

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DIRECTV System hardware and installation

To arrange for professional installation of your DIRECTV System, ask questions, or resolve problems related to your DIRECTV System, contact your dealer. If you need more information, please contact the Sony Satellite System Information Center at 1-800-838-7669.

Please record the following information for warranty

System Model #: - _____

Receiver Model #: _____

Receiver Serial #: _____

Access Card #: _____ _____ _____

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For your safety and protection, read this entire Owner's Manual before you attempt to install or use your satellite system. In particular, read this safety section carefully. Keep this safety information where you can refer to it if necessary.

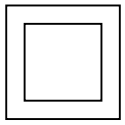
Important Safety Instructions

Heed Cautions–All cautions on the product and in the operating instructions should be adhered to.
Follow Instructions–All operating and use instructions should be followed.

THESE CAUTIONS AND SYMBOLS APPEAR ON THE BACK OF THE RECEIVER

WARNING or CAUTION

Double insulated systems are protected by additional board clearances and creepage, so that the unit will not be a safety hazard to the end-user.



IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Polarization – This DIRECTV® Receiver is equipped with a plug that will fit into the power outlet only one way. Do not modify the plug defeating this feature. If the plug does not fit, contact your electrician to replace your outlet. To prevent electric shock, do not use this plug with an extension cord or outlet unless you can fully insert the blades without blade exposure

Power Sources – Operate this DIRECTV Receiver only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

Power-Cord Protection – Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electrical shock.

Ventilation – Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

The openings should never be blocked by placing the product on a bed, sofa, rug, or similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.

For electrical safety, power line operated equipment or accessories connected to this unit should bear the UL listing mark and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

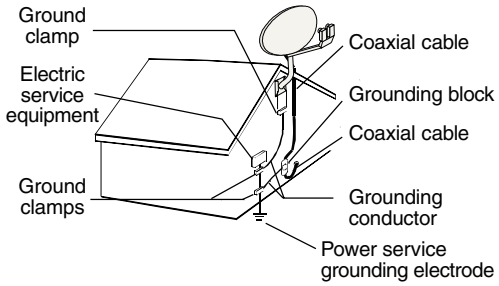
Heat–Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Accessories – To avoid personal injury or damage to the DIRECTV Receiver, do not place the DIRECTV Receiver on any unstable cart, stand, table, or bracket. Any mounting of the product should follow the manufacturer's instructions.

Attachments – Do not use attachments unless recommended by DIRECTV as they may cause hazards.

Satellite Dish Antenna Grounding – The outdoor satellite dish antenna used to receive satellite signals and the cable used to connect the satellite dish antenna to the indoor receiving unit are required to comply with local installation codes and the appropriate sections of the National Electric Code (NEC) and in particular Article 810-15, which covers proper installation and grounding of television receiving equipment, as well as to Article 820-33, which specifies that the satellite dish antenna cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical. These codes require proper grounding of the metal structure of the outdoor satellite dish antenna and grounding of the connecting cable at a point where it enters the house (or other building). If you are having a professional installer perform the installation, the installer must observe installation codes. This manual contains instructions on how to make the installation in compliance with the NEC. If additional local installation codes apply, contact local inspection authorities.

Example of Antenna Grounding according to the National Electrical Code instructions contained in "Radio and Television Equipment".



Note: The DIRECTV Receiver shall be grounded through the satellite/ local antenna cable before plugging into the telephone jack, and it must remain grounded thereafter.

Water and Moisture – WARNING! To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

Lightning – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet, disconnect the antenna and cable system, and disconnect it from the telephone line. This will prevent damage to the product due to lightning and power-line surges.

Television Antenna Information – Installing an outdoor antenna can be hazardous and should be left to a professional antenna installer. Do not locate the outside antenna system in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, take extreme care to keep from touching such power lines or circuits, as contact with them might be fatal. If an outside antenna is connected to the DIRECTV Receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. This DIRECTV Receiver is equipped with a plug that will fit into the power outlet only one way. Do not modify the plug defeating this feature. If the plug does not fit, contact your electrician to replace your outlet. To prevent electric shock, do not use this plug with an extension cord or outlet unless you can fully insert the blades without blade exposure. Section 810 of the NEC, NFPA No. 70 1987, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of the grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Power Lines – Extreme care must be taken when installing and adjusting or maintaining the outdoor antenna and connecting cable, especially in the vicinity of overhead power lines, electric lights, or power circuits. When installing the outdoor antenna or cable, extreme care should be taken to keep from touching or approaching such power lines or circuits, as contact with them might be fatal.

Cleaning – Unplug this receiver from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use only a damp cloth for cleaning.

Object and Liquid Entry – Never push objects of any kind into this DIRECTV Receiver through openings as they may touch dangerous voltages or "short out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the receiver. No objects filled with liquids, such as vases, shall be placed on the apparatus.

SERVICE

Servicing–Do not attempt to service this DIRECTV® Receiver yourself as opening or removing covers may expose you to dangerous voltage or other hazards. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

Conditions Requiring Service–Unplug the DIRECTV Receiver from the wall outlet and refer servicing to qualified personnel under the following conditions:

- When the power supply cord or plug has been damaged.
- If liquid has been spilled on, or objects have fallen into, the DIRECTV Receiver or it has been exposed to water.
- If the DIRECTV Receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Other adjustments may result in damage and will often require extensive work by a qualified technician to restore the DIRECTV Receiver to its normal operation.
- If the DIRECTV Receiver has been dropped or the cabinet has been damaged.
- When the DIRECTV Receiver exhibits a distinct change in performance.

Replacement Parts–When replacement parts are required, have the technician verify that the replacements being used have the same safety characteristics as the original parts. Use of replacement parts specified by the manufacturer can prevent fire, electric shock, or other hazards.

Safety Check–Upon completion of any service or repairs to this DIRECTV Receiver, ask the service technician to perform safety checks recommended by the manufacturer to determine that the DIRECTV Receiver is in safe operating condition.

Your DIRECTV Receiver is able to receive upgrades or modifications to some of its features and functions. These modifications will occur automatically, usually at times when the receiver would likely be turned off. If your receiver is on when an upgrade or modification is sent, you may experience a disruption in reception for a minute or two. Your reception should return to normal after the modification is complete. Your receiver must be plugged in to receive any upgrades. Do not unplug your receiver while an upgrade is in progress. Please consult the Upgrade menu to find a schedule of upgrades or modifications planned by DIRECTV.

With this receiver (SAT-A65A, SAT-B65A) and the proper satellite dish antenna, you may be able to subscribe to local channels from DIRECTV in certain areas. Additional equipment may be required in some markets. Check with your retailer or visit DIRECTV.com for information on availability of local channels from DIRECTV in your area.

Federal Communications Commission (FCC) Regulatory Information

Declaration of Conformity– Standards to which Conformity is declared: FCC Part15

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) **this device must accept any interference received, including interference that may cause undesired operation.**

- Responsible Party's Name: Sony Electronics Inc.
  Address: 680 Kinderkamack Road, Oradell, NJ 07649 U.S.A
  Telephone: 1-800-858-7669
- Trade Name: Sony
- Type of Equipment: Satellite Receiver
- Model Numbers: SAT-A65A, SAT-B65A, RM-Y812, RM-Y807

Federal Communications Commission (FCC)–This equipment complies with both Part 15 and Part 68 of the FCC rules.

Part 15 Compliance–This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by removing and applying power to the equipment, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving satellite dish antenna.
- Increase the separation between the equipment and the DIRECTV® Receiver.
- Connect the equipment into an outlet on a circuit different from that to which the DIRECTV Receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio and TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC.

To meet FCC requirement, only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with Class B limits may be attached to this device. Operation with noncertified peripherals is likely to result in interference to radio and TV reception.

To meet FCC requirements, shielded cables are required to connect the device to a personal computer, peripheral, or other Class B certified device.

Part 68 Compliance –This equipment complies with Part 68 of the FCC rules. On the modem card is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be provided to the Telephone Company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5). To be certain of the number of devices that may be connected to the line, contact the Telephone Company to determine the maximum number of RENs for the calling area.

If the DIRECTV Receiver (Model Numbers: (SAT-A65A, SAT-B65A) terminal equipment causes harm to the telephone network, the Telephone Company will notify you in advance that temporary discontinuance of service may be required. But, if advance notice is not practical, the Telephone Company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC, if you believe it is necessary. The Telephone Company may request that you remove the equipment from the network until the problem is resolved.

The Telephone Company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the Telephone Company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If you have trouble with the DIRECTV Receiver (Model Numbers: SAT-A65A, SAT-B65A) equipment, please contact

Sony Satellite System Information Center at 1-800-858-SONY (7669)

for repair and/or warranty information.

Sony must make any necessary repairs to the modem portion of this equipment in order to maintain valid FCC registration. Do not attempt to repair or service your modem. Return it to Sony.

No repairs can be made by customers. All repairs must be done by an authorized Sony Service Center. This equipment cannot be used on public coin service provided by the Telephone Company. Connection to Party Line Service is subject to state tariffs.

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Getting started 1

You may connect a second DIRECTV Receiver to the unused LNB output. These instructions also apply to an additional receiver.

This chapter explains how to:

- Connect the DIRECTV® satellite dish antenna to your DIRECTV Receiver (*this page*).
- Connect your DIRECTV Receiver to your TV (*see page 3*).
- Find antenna azimuth and elevation settings for your location (*see page 4*).
- Test the DIRECTV System operation (*see page 5*).

How to use this manual

This manual uses these typographical conventions to help clarify instructions:

Text Example	Description
Click **Cancel**.	On-screen command buttons that execute an action.
Highlight the ***Messages*** button.	Pull-down and pop-up box selections, or other option buttons within a menu pane.
Press the INFO button. Connect a pair of A/V cables to the AUDIO IN jack.	Remote control buttons, or receiver front panel. Names of equipment cable connections on equipment.
Highlight the **Options** tab.	Menu tab names
Display the **MAIN MENU**.	Menu and pane names, names of pop-up and sub-menu panes.

Setup overview

At this point, you should have:

- Mounted the DIRECTV satellite antenna and pointed it in the general direction of the satellite.
- Grounded the antenna as described in your antenna installation instructions.
- Attached RG-6 coaxial cable(s) to the antenna LNB connector(s).
- Routed the other end of the antenna cable to the back of your DIRECTV Receiver.
- Placed the DIRECTV Receiver accessible to a telephone modular jack.

Ensure that you have completed these procedures, then continue to the next page to begin installing the DIRECTV Receiver.

Attach the antenna cable

You can configure your system several ways, depending on what additional components (such as a VCR, DVD player, or A/V receiver) you select. For now, however, use the simplest configuration to check your antenna and cabling.

- Ensure that the DIRECTV® Receiver is **not** plugged into an electrical outlet.
- Attach the RG-6 coaxial antenna cable to the SATELLITE IN connector on the back of the DIRECTV Receiver. Refer to the appropriate figure below.

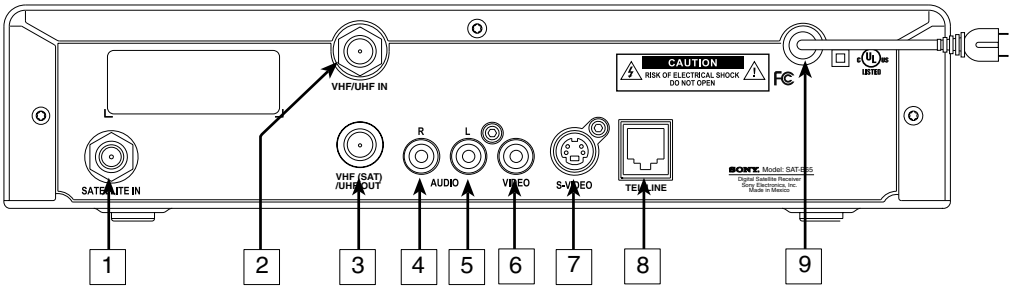


Table 1: Rear panel connections - SAT-B65A DIRECTV Receiver

1	SATELLITE IN connector	6	VIDEO OUTPUT jack
2	VHF/UHF IN connector	7	S-VIDEO jack
3	VHF (SAT)/UHF OUT connector	8	TELEPHONE JACK
4	AUDIO OUTPUT (R) jack	9	AC POWER CORD
5	AUDIO OUTPUT (L) jack		

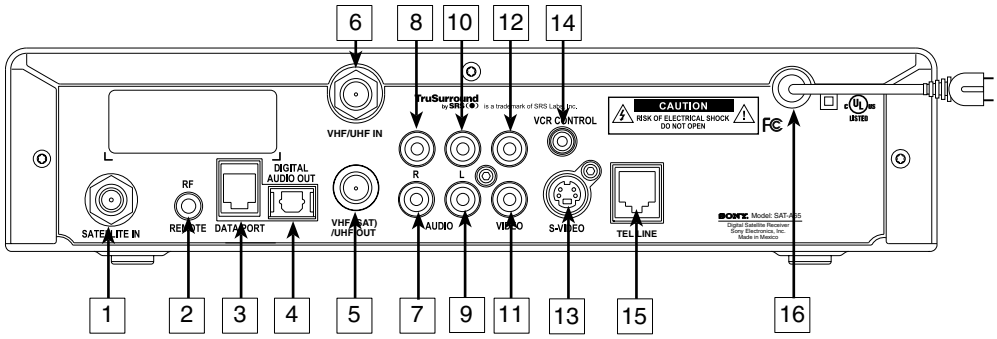


Table 2: Rear panel connections - SAT-A65A DIRECTV Receiver

1	SATELLITE IN connector	9	AUDIO OUTPUT (L) jack
2	RF REMOTE antenna jack	10	AUDIO OUTPUT (L) jack
3	DATA PORT	11	VIDEO OUTPUT jack
4	DIGITAL AUDIO OUTPUT optical jack	12	VIDEO OUTPUT jack
5	VHF (SAT)/UHF OUT connector	13	S-VIDEO jack
6	VHF/UHF IN connector	14	VCR CONTROL cable jack
7	AUDIO OUTPUT (R) jack	15	TELEPHONE JACK
8	AUDIO OUTPUT (R) jack	16	AC POWER CORD

Connect your TV

Depending on your TV, you can connect it to the receiver in one of three ways:

- S-Video cable *(best picture quality)* or
- Video cable *(very good picture quality)* or
- Coaxial cable *(good picture quality)*

In addition to your video connection, use a set of audio cables (L/R) to provide stereo sound. If your TV does not have audio jacks, you will hear monophonic audio. This is acceptable for the procedures described in the next section.

To connect your TV to the DIRECTV® Receiver:

1. Select the appropriate connection:
   If your TV has an S-Video jack –
   - Use an S-Video cable (supplied with SAT-A65A only) to connect the DIRECTV Receiver's S-VIDEO jack to the TV's S-VIDEO jack.
   - Use audio cables to connect the DIRECTV Receiver's AUDIO jacks to the TV's AUDIO IN jacks.

   If your TV has RCA-type A/V connectors –
   - Connect the DIRECTV Receiver's AUDIO and VIDEO jacks to the TV's A/V IN jacks.
   - If your TV has only one AUDIO IN jack, connect the receiver's AUDIO L jack to the TV AUDIO IN jack.

   If your TV only has an RF (coaxial) connector –
   - Connect the DIRECTV Receiver's VHF (SAT)/UHF OUT connector to the TV's VHF/UHF IN or RF IN jack.
2. Connect one end of the telephone line cord provided into the DIRECTV Receiver's PHONE JACK.
3. Connect the other end into a modular telephone outlet.
4. Plug the TV into an electrical outlet.
5. Plug the DIRECTV Receiver power cord into an electrical outlet. If the front panel Power indicator does not illuminate, press the POWER button.

Onscreen Menu Icons

These icons appear in onscreen menus and are used throughout this manual:

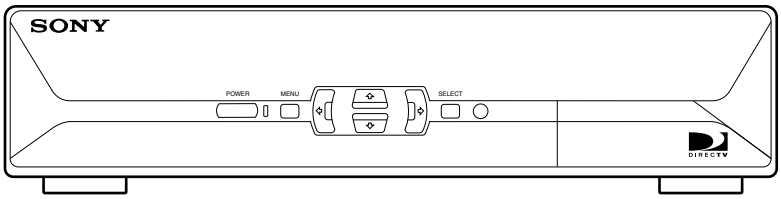
Toggle or Step – Press SELECT to toggle (switch) a setting from "ON" to "OFF" or step through the available choices each time you press SELECT.

List of Options – Menu button will display a list of choices in a pop-up menu when you press SELECT.

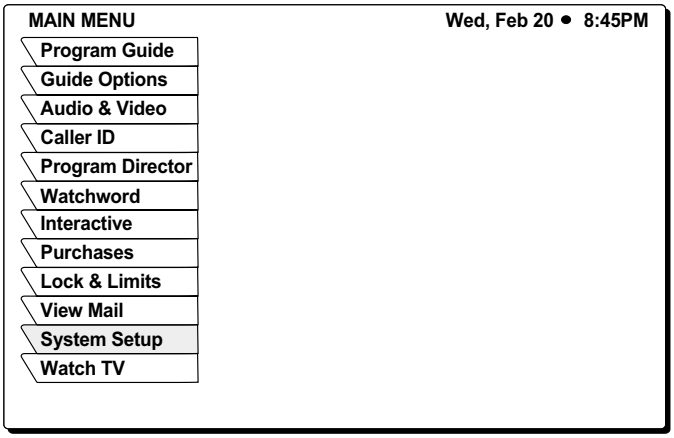
Series of Boxes – Multiple screens will appear in a series requesting you to enter numbers and/or letters for the particular feature when you press SELECT.

Determine antenna angles

This section explains how to determine the proper antenna position. This is expressed in degrees of *azimuth* (horizontal) and *elevation* (vertical). Use the receiver front panel controls shown below to complete this procedure.



1. Press the front panel MENU button to display the **MAIN MENU** below.
2. Use the ▼ button to highlight the **System** tab.



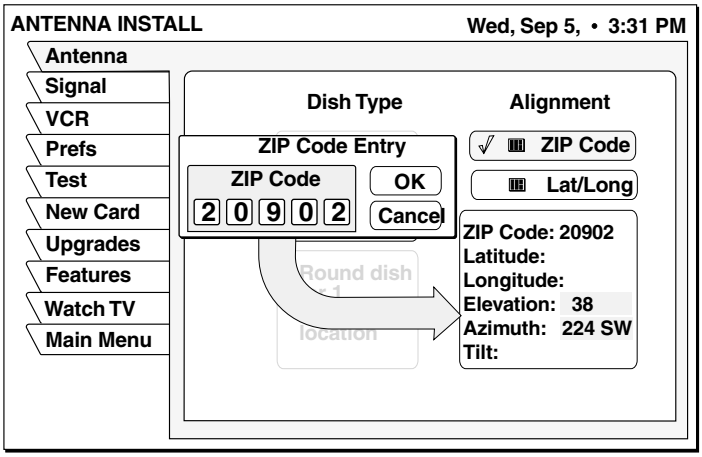
Main Menu tabs

3. Press the front panel SELECT button.
4. The **ANTENNA INSTALL** menu allows you to determine the correct antenna position using your 5-digit ZIP code. Enter your ZIP code and press SELECT.

Tilt angle also appears if you select an Oval Antenna from the Dish Type menu.

The correct azimuth and elevation angles appear as shown below.

5. Use these values to properly align your dish antenna.

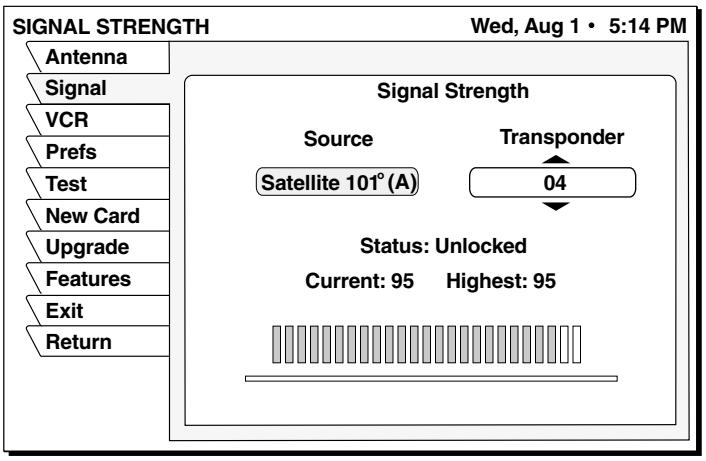


Finding antenna settings based on ZIP code

Testing your system

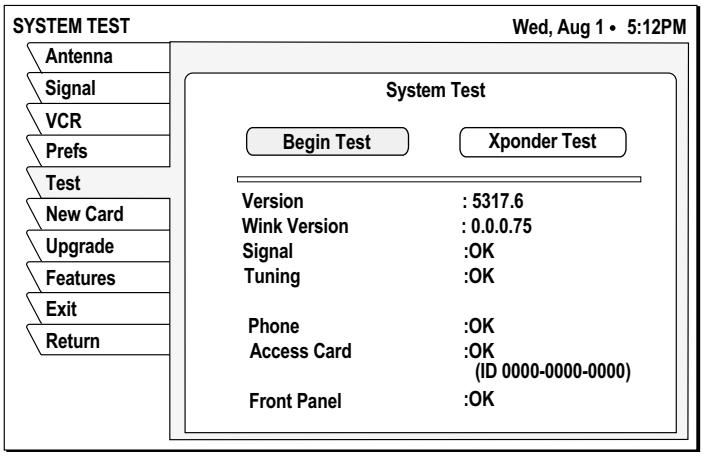
When you have aligned your dish antenna to the azimuth and elevation angles shown on the **Antenna** pane:

1. Highlight the **Signal** tab.
2. Use the ▶ button to highlight the ***Source*** pull-down menu
3. Signal quality is indicated by a scale at the bottom of the pane and with an audible indication. The frequency and tempo of the tone increase with signal strength.



4. Highlight the ***Transponder*** pull-down menu.
5. You may need to select another transponder to achieve the highest signal indication.
6. Select the transponder providing the best signal.
7. Use the ▼ button to highlight the **Test** tab.
8. Highlight **Begin Test** and press the SELECT button.

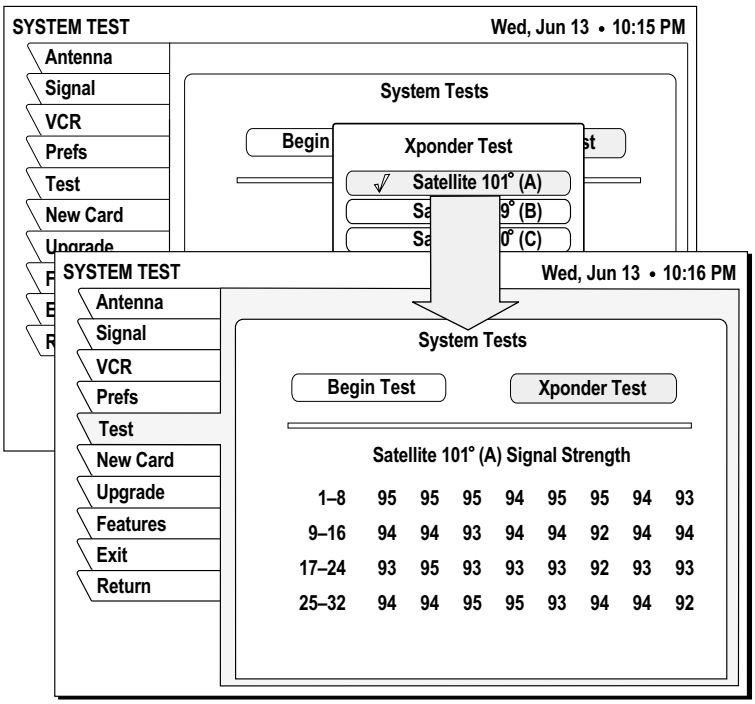
Results appear within a few seconds and should resemble those in the figure. If your test results are much different from those shown in the figures, or you receive no signal indication, refer to page 6.



To perform the Transponder test:

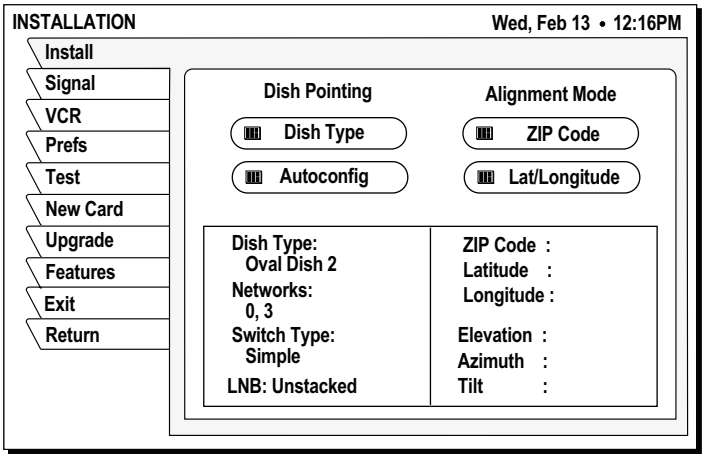
1. Move the highlight to the ***Xponder Test*** pull-down menu.
2. Press the SELECT button.

3. Press SELECT again to test the first selection on the pop-up menu.



Your results will differ slightly from those shown, depending on your geographic location and specific installation. However, if your results are very different from these examples (i.e, rows of zeros or single-digit numbers):

- Highlight the **Antenna** tab on the **ANTENNA SETUP** menu, then carefully verify your settings for accuracy.



Antenna Setup pane

- Re-enter your ZIP code if necessary to verify you have used the correct antenna pointing parameters for your location.
- Check your cable connections.
- Ensure the DIRECTV® Receiver is connected to a modular telephone jack.

Once you have successfully obtained a signal and your test results resemble those shown in the figures, call DIRECTV (or your subscription service provider) to activate service if you have not done so already.

Adding system components 2

You can configure your DIRECTV® Receiver several ways depending on the additional audio/video components you want to use.

This chapter explains how to:

- Connect a terrestrial (broadcast) TV antenna (*this page*).
- Connect the optional RF remote control antenna (*this page*).
- Connect and set-up a VCR (*see page 8*).
- Integrate the DIRECTV Receiver into your existing audio or A/V system (*see page 10*).

Connecting components

At this point, you should have:

- ☐ Verified that your system is operating properly.
- ☐ Connected your DIRECTV Receiver to your TV.
- ☐ Unplugged all components from electrical outlets.

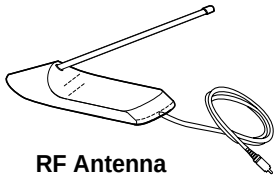
Connect a terrestrial antenna

You can connect a terrestrial (broadcast) TV antenna to your DIRECTV Receiver by connecting it to the DIRECTV Receiver's TV ANT/CABLE IN jack (refer to figures on page 2). The remote control INPUT button allows you to switch between DIRECTV® programming and input from the terrestrial antenna.

Connect the RF remote control antenna

(SAT-A65A only)

The SAT-A65A DIRECTV Receiver uses an optional RF (radio frequency) remote control antenna that allows you to control your receiver from other rooms in your house.



RF Antenna

1. Plug the RF remote control cable into the RF REMOTE connector on the DIRECTV Receiver rear panel (refer to figures on page 2.)
2. Extend the cable and place the antenna in the desired location

To achieve the best operating range from the remote control, position the antenna as high and as far away from metal objects as possible.

Connecting a VCR

Follow these instructions to connect your TV and VCR to the DIRECTV® Receiver. Connect the satellite antenna RG-6 coaxial cable to the DIRECTV Receiver's SATELLITE IN jack (refer to figures on page 2).

1. Depending on your VCR, select the appropriate connection to the DIRECTV receiver:
   If your VCR has A/V connectors –
   - Connect the DIRECTV Receiver's AUDIO and VIDEO jacks to the VCR's A/V IN jacks.

   If your VCR only has an RF (coaxial) connector–
   - Connect the DIRECTV Receiver's OUT TO TV connector to the VCR's VHF/UHF IN or RF IN jack.
   - If your VCR has only one AUDIO IN jack, connect the receiver's lower (mono) AUDIO L jack to the VCR's AUDIO IN jack.
2. Depending on your TV and VCR, select the appropriate method to the connect the VCR to the TV:
   If your TV and VCR have A/V connector –
   - Connect the DIRECTV Receiver's AUDIO and VIDEO jacks to the TV's A/V IN jacks.

   If your TV or VCR only has an RF (coaxial) jack –
   - Connect the VCR's VHF/UHF OUT jack to the TV's VHF/UHF IN jack.
3. Plug the TV, VCR, and DIRECTV Receiver power cords into an electrical outlet.

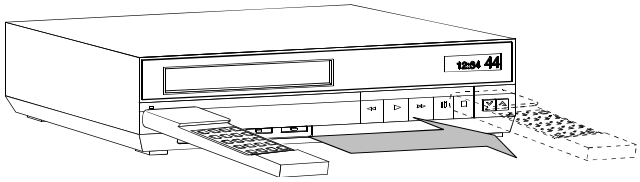
Connect the VCR Control Cable *(SAT-A65A only)*

Using the VCR Control Cable provided, the SAT-A65A DIRECTV Receiver can control your VCR for unattended recording.

1. Plug the VCR control cable into the rear panel VCR CONTROL jack.
2. Temporarily position the other end over the VCR's remote control sensor (normally a small dark plastic window on the VCR front panel).

The remote control sensor may be labeled or identified in your VCR manual. If it is not identified, scan the front of the VCR with your VCR remote control:

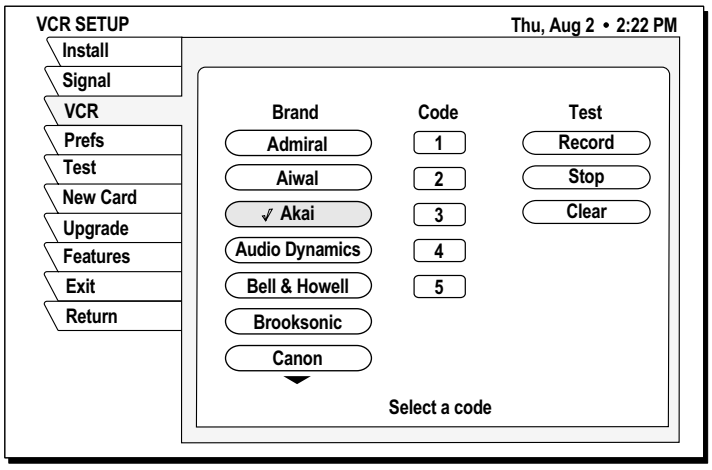
3. Hold the VCR remote control about ½-inch (1.3 cm) from the front left side.
4. Slowly move the remote control to the right as shown in the figure.
5. Repeatedly press the remote control's power key on and off.



Scanning for the VCR remote control sensor

6. When your VCR responds to your pressing the remote control power, note the position. Temporarily tape the emitter to the position you marked until you verify that it works properly.

7. Test the VCR control feature as described below.
8. Remove the temporary mounting tape. Attach the emitter permanently with peel-and-stick backing. This will not interfere with normal VCR operation. The VCR SETUP menu provides the settings to allow the DIRECTV® Receiver to communicate with your VCR.



9. Scroll through the VCR brands using the navgation buttons. If you cannot find the correct code listed for your brand of VCR, try related brands that use the same code. Your VCR may also respond to multiple codes.
10. Use the remote control SELECT button to try each code.
11. Alternate between this procedure and testing the code.

Test the VCR (Record/Stop)

(SAT-A65A only)

This Record/Stop test verifies the specified brand and code controls your VCR. Before starting the test:

- Turn the VCR power on.
- Verify the VCR Control Cable is properly connected.
- Insert a recordable videotape into the VCR.

Signals coming from the remote control at the same time as signals coming from the VCR Control cable may provide unreliable test results.

Use the DIRECTV Receiver *front panel* controls, rather than the remote control, to test the codes.

Test the VCR **record** and **stop** commands. If either command does not function, try other codes shown for your VCR brand. If you are unsuccessful after trying *all* available codes, recheck your VCR Control Cable connections and IR emitter placement.

Connecting a home entertainment system

*The A/V receiver **must** be turned on in order to send the video signal to your TV.*

You can integrate the DIRECTV® Receiver into your entertainment system to take advantage of enhanced audio and video capability. Follow these instructions to connect your DIRECTV Receiver.

- To connect the DIRECTV Receiver to your audio system, use A/V cables to connect the satellite receiver to the audio receiver's AUDIO IN jacks. Refer to the figures on page 2 for rear panel connector locations.
- Dolby Digital - With the SAT-A65A model, you can enjoy programs that contain a Dolby Digital sound track. We recommend that you listen in surround sound for maximum enjoyment of these programs. You can connect the stereo outputs of the SAT-A65A to a receiver that contains a Dolby Surround Pro Logic decoder. This will provide you with three audio channels in the front and a mono surround channel.
- To take full advantage of Dolby Digital programming, connect the SAT-A65A digital audio output to an external *5.1-channel* Dolby Digital decoder or receiver. This provides you with three front channels, two independent surround channels, and a sub-woofer channel.

1. Connect the satellite antenna RG-6 coaxial cable to the DIRECTV Receiver's SATELLITE IN jack.
2. Connect the DIRECTV Receiver's A/V jacks to the VCR and A/V receiver's A/V jacks.
3. *AUX, optical connection, and digital output connections* – If your audio receiver has coaxial or optical digital connectors, connect the appropriate type of cable to the DIRECTV Receiver's DIGITAL AUDIO OUT *(SAT-A65A only)* for two-channel digital stereo. If your A/V receiver is also capable of decoding Dolby Digital, use this connection in order to listen in full 5.1-channel surround sound. Additional audio information begins on page 20.
4. Connect the VCR's A/V OUT jacks to a pair of the A/V receiver's A/V IN jacks.
5. Connect the A/V receiver's MONITOR OUT jack to the TV's VIDEO IN jack.
6. Plug the components into an electrical outlet.

Note: If you have connected a VCR to your entertainment system in a way that routes the satellite receiver's signal to your VCR before it reaches the TV, you may see a distorted picture if you try to record a copy-protected program. A *Can't Tape* symbol in the screen banner identifies these programs. If this occurs, simply stop recording and the picture will automatically correct itself.

This chapter explains how to:

- Use the RM-Y812 and RM-Y807 remote control functions. (*see page 15*)
- Install and replace the remote control batteries. (*see page 15*)
- Program the remote to work with your system components. (*see page 16*)
- Access interactive programming features. (*see page 16*)

1 **MUTING button** - Mutes the volume. Press again to restore the volume. To operate your TV, you must first set up the remote control (see pages 15–16).

2 **TV/VIDEO button** - Switches between the inputs of your TV. To operate your TV, you must first set up the remote control (see pages 15–16).

3 **TV/VCR button** - Switches between the inputs of your VCR. To operate your VCR, you must first set up the remote control (see pages 15–16).

4 **TV/SAT button** - Switches your satellite receiver output between regular TV and satellite broadcasts. To receive regular TV broadcasts, you must have a local TV antenna or cable connection.

5 **Subchannel button** - Use with the 0-9 buttons to select digital video subchannels (if available).

6 **DISPLAY button** - Displays information for the current program.

7 **EXIT button** - Closes all on-screen displays.

8 **MENU button** - Opens the Main Menu.

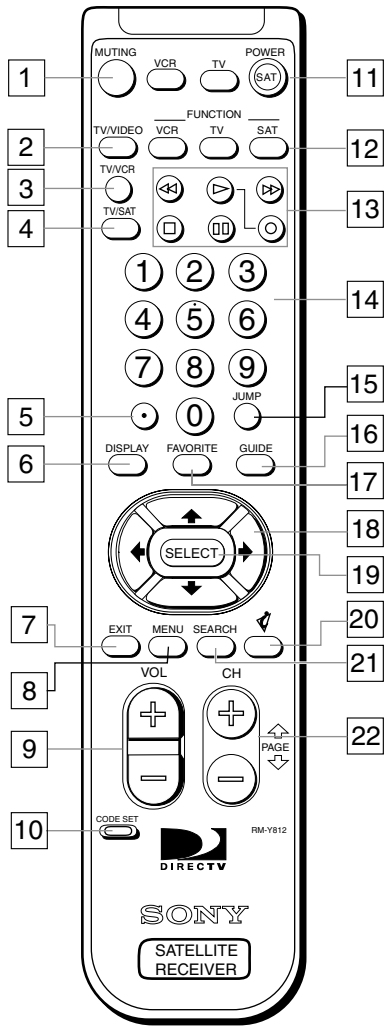
9 **VOL button** - Adjust the volume. To operate your TV, you must first set up the remote control (see pages 15–16).

10 **CODE SET button** - Lets you program the remote control to operate your TV and other audio/video equipment (see pages 15–16).

11 **POWER buttons** - Turn on and off the Satellite Receiver, TV, and VCR. To operate your TV or VCR, you must first set up the remote control (see pages 15–16).

12 **FUNCTION buttons** - Select the equipment (SAT,TV,VCR) that you want to operate. The indicators light up to show which device the remote control is operating.To operate your TV or VCR, you must first set up the remote control (see pages 15–16).

13 **VCR Control buttons** - Operate VCR features such as play, record, pause, stop, and fast wind. To operate your VCR, you must first set up the remote control (see pages 15–16).



RM-Y812

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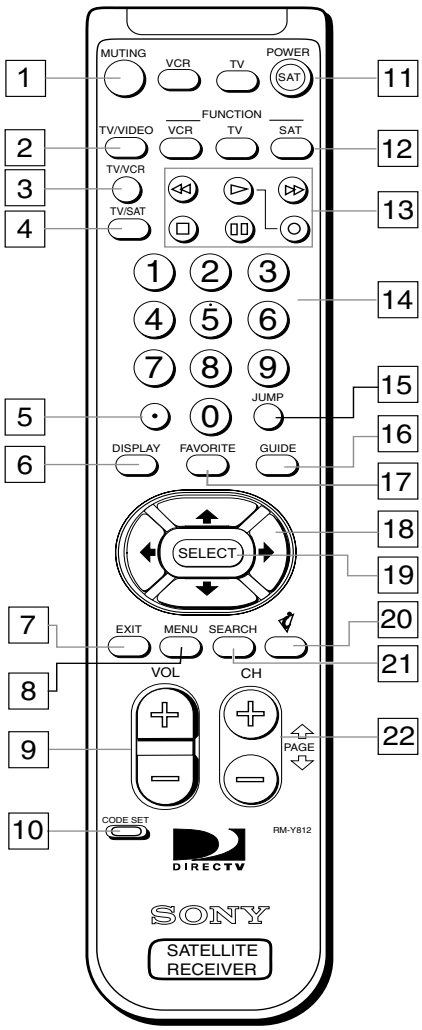


RM-Y812

14 **0-9 buttons** - Change channels directly and enter numerical values in onscreen displays.

15 **JUMP button** - Changes channels to the previously tuned channel.

16 **GUIDE button** - Opens the Program Guide.

17 **FAVORITE button** - Changes the guide to the next Favorite Stations.

18 **Navigation buttons** - The navigation buttons move the highlight in on-screen displays. If there is no on-screen display, the up/down buttons activate the one-line guide.

19 **SELECT button** - The SELECT button selects the highlighted item.

20 **button**- Access interactive features.

21 **SEARCH button** - Access the Search feature to find favorite programs.

22 **CH +/–/PAGE buttons** - Change channels. When a program guide is open, these buttons page through the guide.

*The MUTING, SLEEP and VOL +/- buttons are set to control an audio receiver unless the Device Switch is set to "TV". To change this setting, see **Changing the remote default** on page16.*

1 **MUTING button** - Mutes the volume of the audio receiver. Press again to restore the volume. To operate your TV, move the device switch to TV or see *Changing the remote default* on page 16. To operate your audio receiver or TV, you must first set up the remote control (see pages 15–16).

2 **SLEEP button** - Sets the audio receiver to turn off automatically after a certain amount of time (if your audio receiver has a compatible Sleep feature). To operate your TV, move the device switch to TV or see *Changing the remote default* on page 16. To operate your audio receiver or TV, you must first set up the remote control (see pages 15–16).

3 **SOUND FIELD +/– buttons** - Switches between the various Sound Field settings of compatible audio receivers. To operate your audio receiver, you must first set up the remote control (see pages 15–16).

4 **0-9 buttons** - Change channels directly, and enter numerical values in on-screen displays.

5 **Subchannel button** - Use with the 0-9 buttons to select digital video subchannels if available (for example, 2.1).

6 **DISPLAY button** - Opens the program information display for the current program.

7 **MENU button** - Opens the Main Menu.

8 **VOL (Volume) +/– button** - Adjusts the audio receiver volume. To operate your audio receiver or TV, you must first set up the remote control (see pages 15–16).

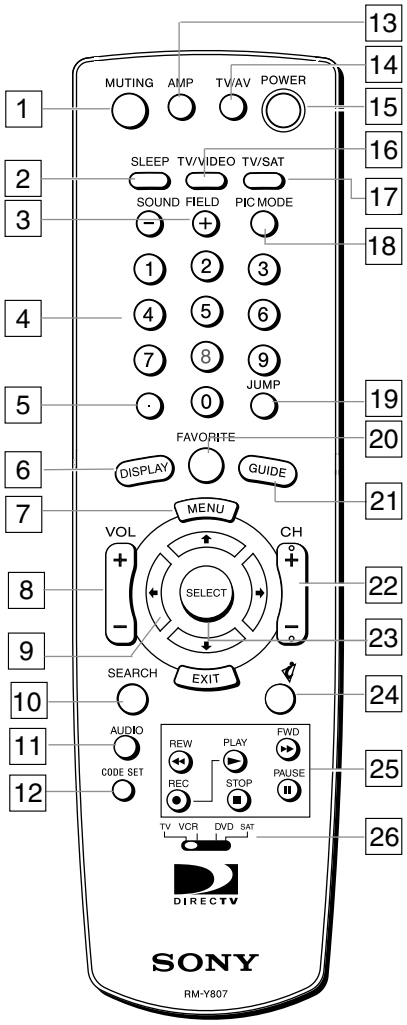
9 **Navigation button** - The navigation buttons move the highlight in the on-screen displays. When no menus are displayed, pressing the up or down navigation buttons activate the one-line guide.

10 **SEARCH button** - Access the SEARCH feature to find favorite programs.

11 **AUDIO buttons** - Changes the audio track of the current DVD in the DVD Player (if available). To operate your DVD Player, you must first set up the remote control (see pages 15–16).

12 **CODE SET button** - Lets you program the remote control to operate your TV and other audio/video equipment (see pages 15–16).

13 **AMP POWER button** - Turn on and off the audio receiver.To operate your audio receiver, you must first set up the remote control (see pages 15–16).



RM-Y807

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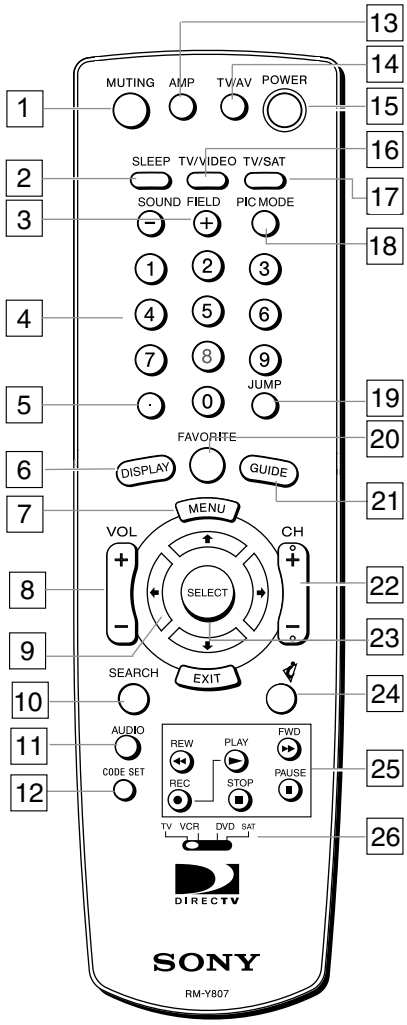


RM-Y807

14 **TV/AV POWER button** - Turn on and off the TV. To turn on and off the DVD or VCR, move the device switch to DVD or VCR. To operate your TV, DVD, or VCR, you must first set up the remote control (see pages 15–16).

15 **POWER button** - Turn on and off the satellite receiver.

16 **TV/VIDEO button** - Switches between the inputs of your TV. To operate your TV you must first set up the remote control (see pages 15–16).

17 **TV/SAT button**- Switches the signal being output by the VHF(SAT)/UHF OUT jack from the SATELLITE IN to VHF/UHF IN.

18 **PIC MODE button** - Switches between the Picture Mode setting of compatible TVs. To operate your TV you must first set up the remote control (see pages 15–16).

19 **JUMP button**- Changes channels to the previously tuned channel.

20 **FAVORITE button** - Toggles the Favorite Stations guides.

21 **GUIDE button** - Opens the Program Guide.

22 **CH (Channel) +/– button** - Changes channels. When a program guide is open, pressing the CH button pages through the guide.

23 **SELECT button** - Access the Search feature to find favorite programs.

24 **button** - Access interactive features.

25 **VCR/DVD Control buttons** - Operate VCR/DVD features such as play, record, pause, stop, and fast wind. To operate your VCR/DVD you must first set up the remote control (see pages 15–16).

26 **Device switch (TV/VCR/DVD/SAT switch)** - Set the remote to operate other devices in your home theater. To operate these other devices, you must first set up the remote control (see pages 15–16).

The DIRECTV® Receiver front panel buttons can provide the basic controls needed to access major DIRECTV System features. However, using the remote control simplifies accessing the basic system functions, enhances your system's capabilities, and provides convenient shortcuts to extended features. Additionally, some remote control buttons can also control other home entertainment system components.

Remote control functions

The navigation buttons are the most versatile (and most used) remote control feature. Using only the navigation buttons, you can perform virtually all on-screen functions including:

- Selecting a highlighted screen menu item.
- Moving the screen highlight (or *cursor*) up, down, left and right.
- Jumping directly to the OneLine™ Guide.
- Changing channels using the OneLine Guide.

Use the navigation buttons to move up, down, left, or right through the on-screen displays.

Press the navigation buttons up or down to display the OneLine guide while you are watching a program. When the OneLine guide appears, press the navigation buttons up or down to step to the next higher- or lower-numbered channel.

Press the GUIDE button to display the current program guide. Press it a second time (while a program title is highlighted) to display the **Guide Options** menu.

Press the DISPLAY button to display a brief description about the program you are viewing. For more details, press it again to display the *Information Banner.* The DISPLAY button provides scheduling information (and pay per view purchase information) about the program highlighted in the program guide. See Chapter 5 – *Using program guides*, on page 27 for more information.

Use the CHANNEL (CH +/–) button to move up or down to the next available channel in the OneLine Guide or scroll through a page of program guide selection.

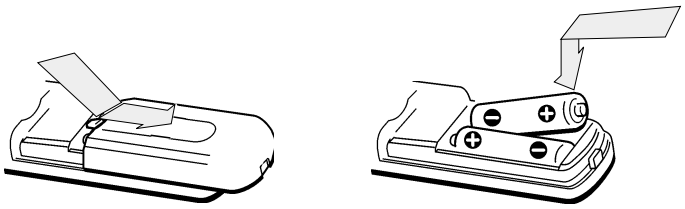
Press the EXIT button to exit from any on-screen guide, remove banners, or terminate an action.

RM-Y807 Remote Control:
Move the device switch to SAT to control the DIRECTV® Receiver. The other positions on the device switch indicate the devices they control.

RM-Y812 Remote Control:
Press the SAT function button to control the DIRECTV Receiver. The other function buttons indicate the devices they control.

Installing remote control batteries

To install or replace the remote control batteries:



1. Locate the battery compartment on the back of the remote control.
2. Remove the battery compartment cover.
3. Insert two “AA” size batteries as shown, observing the correct polarity.
4. Replace the battery compartment cover.

Programming the remote control

The RM-Y807 and RM-Y812 remote controls can be programmed to operate your other audio/video equipment.

1. Find the code(s) for the manufacturer of the device you want to operate with this remote control. You can find these codes on pages 45 and 46.
2. Press the CODE SET button.
3. Press the 0-9 buttons to input the manufacturer code. Then Press the SELECT button. The remote is set up to operate that device.
4. Test the remote control. Press the POWER button for that equipment, then press other operation controls such as the (CH +/–) buttons. If the device does not respond to the remote control, repeat the procedure from step 2 and enter a different manufacturer code in step 3.

Changing the remote default

The RM-Y807 remote is set to control an audio receiver using the MUTING, SLEEP, and VOL +/– buttons unless the device switch is set to TV. This setting can be changed so that these buttons always control the TV.

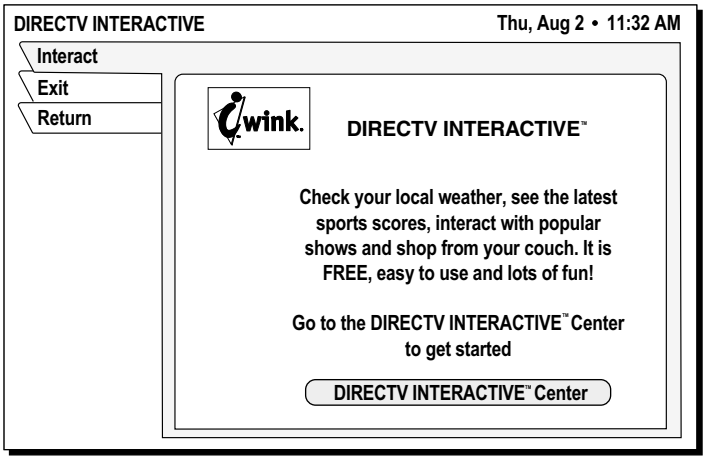
1. Press the CODE SET button.
2. Use the 0-9 buttons to enter the numbers "1," "0," "0," then press the SELECT button. Press the SELECT button a second time.
3. The MUTING, SLEEP, and VOL +/– buttons are now always set to control the TV.
4. To return to the default setting, follow the above step, but enter the numbers "9," "9," "9" in step 2

Using DIRECTV INTERACTIVE™

powered by Wink Communications®

DIRECTV INTERACTIVE powered by Wink Communications® is a free, easy-to-use service that allows you to interact with the television shows and advertisements. When the blinking symbol appears in the upper left part of your screen, you know that the program you're watching has been enhanced with DIRECTV INTERACTIVE.

Simply press the button on your remote control.You can use your remote control to access up-to-the-minute sports scores, news and weather, get program trivia, respond to offers during commercials, and purchase products, all while watching TV.


DIRECTV INTERACTIVE
Thu, Aug 2 • 11:32 AM
Interact
Exit
Return
wink.
DIRECTV INTERACTIVE™
Check your local weather, see the latest sports scores, interact with popular shows and shop from your couch. It is FREE, easy to use and lots of fun!
Go to the DIRECTV INTERACTIVE™ Center to get started
DIRECTV INTERACTIVE™ Center

Select the ***DIRECTV INTERACTIVE Center*** menu bar, then follow the simple directions provided on the subsequent screens.

Using the menus 4

This chapter describes:

- How to find the menus you need to perform common tasks (*this page*).
- How to purchase pay per view events (*see 18*).
- Using the Timer (*see 19*).
- How to set and modify preferences (*see 19*).

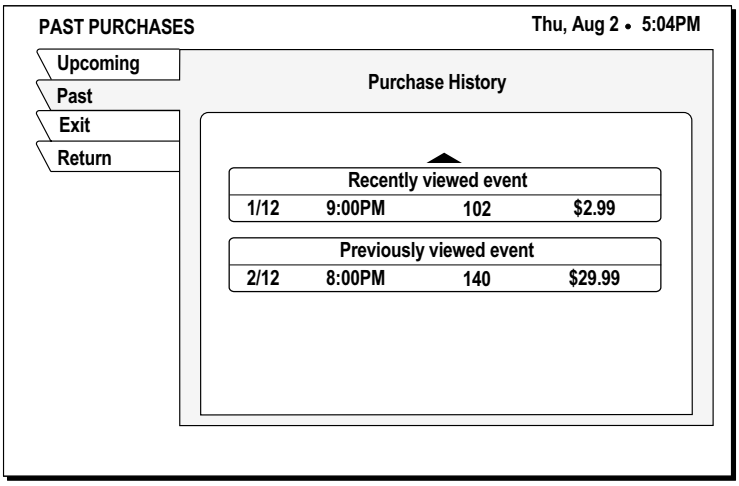
The table below lists the **MAIN MENU** tabs, their submenus, and what they do.

Menu function overview

Main Menu tab	Screens (see page)	If you want to:
Program Guide	Program Guide	• View and modify the program guide.
Guide Options	Theme *(19)* Times *(36)* Favorites List *(33)* Favorites Setup *(33)* Set Options *(33)* Set Channel Mark *(31)*	• Change the name of a program list. • Change the period of time shown in the program guide • Create/edit up to four channel lists (Fav. A, Fav. B, Fav. C, Family) • Create a program listing that contains selected channels • Guide Options: – Guide style (grid or Logo) – Picture in guide, zoom (on or off) – Multi-Color guide (on or off) – Channel Sort (numeric or alpha) – Filters (temporary or persistent) – Reset options to the default selections – Set and edit Channel Mark guide channels
Audio & Video	Audio Adjustment *(20)* Video Adjustment	• Set Default Audio language • Set Alternate Audio language • Set left/right audio balance • Select 4:3 or 16:9 screen ratio • Center menus on your monitor
Caller ID	Caller ID *(23, 26)*	• View names & telephone numbers of recent callers
Timer	Schedule *(20)*	• Automatically tune to programs for viewing or taping
Search	Setup *(23)* Results *(23)*	• Search for programming using specific words • Display search results
Interactive	DIRECTV INTERACTIVE™ *(16)*	• Access interactive programming features
Purchases	Upcoming & Past Purchases *(18)*	• View a list of scheduled pay per view event • Display recently purchased pay per view events
Locks & Limits	Lock *(37)* Fav Setup *(33)* Rating *(38)* Limits *(39)*	• Lock and unlock the system • Set viewing times and maximum viewing hours • Create/edit up to four channel lists (Fav. A, Fav. B, Fav. C, Family) • Set maximum program rating allowed for viewing • Select programming content to be shown in the program guide
Messages	Mail *(19)*	• Read messages from DIRECTV
System	Install *(2)* Signal *(4)* VCR *(7)* Prefs *(19)* Test *(5)* New Card Upgrade Features	• Determine proper antenna azimuth and elevation setting • Test signal reception • Setup VCR for unattended recording (*SAT-A65A* only) • Test system operation • Prepare a new access card • Display upgrade status and history • Display current receiver features

Purchasing pay per view (PPV)

Select the **Purchases** menu tab to display lists of recently viewed and advance purchased pay per view events. You can choose **PAST PURCHASES** and **UPCOMING PURCHASES**. The event channel, title, start date and time, and cost is shown for each purchase.



Pay per view purchases list

The **PAST PURCHASES** pane shows recent pay per view events charged to your account. You cannot remove listed events. The list does **not** show:

- events purchased, but later canceled.
- purchased, cancelable events to which the DIRECTV® Receiver never tuned.
- events ordered by calling DIRECTV.

The **UPCOMING PURCHASES** pane displays:

- PPV events you have purchased but not yet viewed
- PPV events purchased but never viewed.

Events ordered by calling DIRECTV do **not** appear on this list. For additional information about a specific event, highlight the event and press the DISPLAY button.

If you are not authorized for purchases using your DIRECTV Receiver, contact DIRECTV for assistance.

To purchase a pay per view event:

1. Highlight the *Buy* menu pane option
2. Press SELECT
3. Press SELECT again to confirm your purchase.

Cancelling purchases

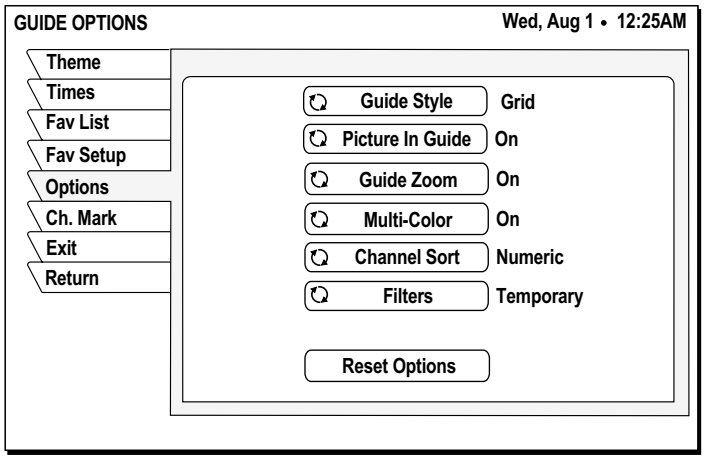
You may cancel some events after purchasing them. You can usually cancel unviewed purchases, however *some* events cannot be cancelled. If the ***Cancel Purchase*** button appears, you can clear the purchase. If this button is unavailable, part of the event has probably already been viewed, and you must accept the purchase.

To cancel a Pay Per View event:

1. Highlight the event you want to cancel.
2. Press SELECT on the remote control.
3. Use the pop-up menu panel to cancel the purchase.

Setting guide preferences

Highlight and SELECT the **Guide Options** tab from the **MAIN MENU**. The **Options** screen (shown below) allows you to customize operation to best suit your needs.

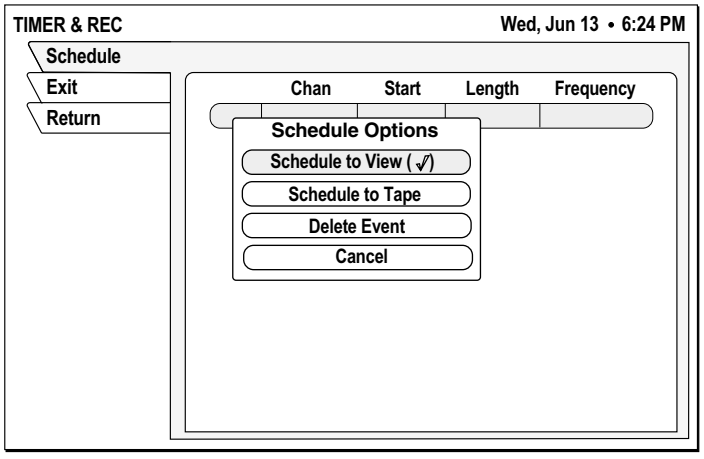


Selecting guide options

Using the Timer

You can program up to 32 events in advance for viewing or unattended recording. The **Timer** will tune to a program at a specific date and time, or tune on a repeating basis. As shown below, you can:

- Schedule programs for viewing (✓)
- Schedule programs for taping ( ) (*SAT-A65A* only)
- Select **Cancel** from the menu if you decide not to schedule anything.



The TIMER pane popup menu

To schedule or edit an event

The **Schedule** pane displays up to seven previously scheduled events at a time. If more than seven events are already scheduled, use the navigation buttons to scroll down to view the additional events. Small arrows at the top or bottom of the list indicate that there are additional events.

You can schedule events up to eleven months in advance.

To schedule a program:

1. Highlight an upcoming program in the program guide and press SELECT. Press SELECT again to cycle through the next available option.
   If you choose a scheduling option, the DIRECTV® Receiver will turn on (if necessary) and tune to the specified channel at the chosen date and time.
2. If you chose ***Schedule to Tape*** (*SAT-A65A only*) and you have set up your VCR (see 7), the DIRECTV Receiver will record the event. For unattended recording:
   - Attach the VCR Control Cable and set up your VCR.
   - Set your VCR for the correct DIRECTV Receiver output: RF (channel 3/4) or A/V (phono or S-Video).
   - Insert a blank videotape and leave the VCR turned on.

*Select **Delete Event** to clear a scheduled event.*

3. Use the navigation buttons to specify AM or PM (or N for noon, or M for midnight if the you specified12:00).
4. Use the same procedure to set the program *Length* in hours and minutes.
5. Use the navigation buttons to advance to the *Frequency* column.
6. Specify when, or how often, the event occurs: *Today*, *Tomorrow*, *Every Mon*, *Every Tue*, *Every Wed*, *Every Thu*, *Every Fri*, *Every Sat*, *Every Sun*, *Everyday*, *Mon-Fri*, or "*/*" (specify a date).

If you specify a date, use the month/day format. The year is set automatically.

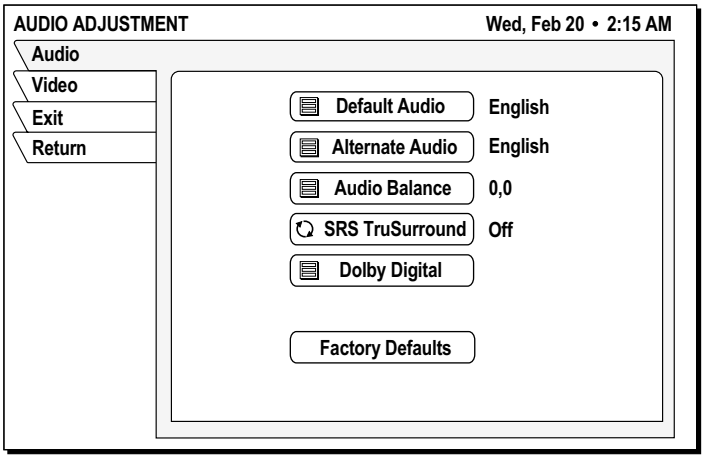
7. After setting the Frequency, use the navigation buttons to advance.
8. Review your settings and choose ***OK***, or choose ***Cancel*** to delete the edits.

To cancel a program scheduled for viewing or taping:
Find the upcoming program in the program guide you wish to cancel and press SELECT until the check mark (✓) or videotape icon ( ) disappears.
If the program is currently airing, you must delete the event from the **Schedule** menu pane accessed from the **TIMER** menu.

Adjusting audio

From the **MAIN MENU,** highlight and SELECT the **Audio & Video** tab.
From the **AUDIO ADJUST** menu pane, you can change:

- *Default Audio and Alternate Audio*
- *Audio Left/Right Balance*
- *TruSurround® Audio Processing (SAT-A65A only)*
- *Dolby Digital Output (SAT-A65A only)*
- *Output Optimization*



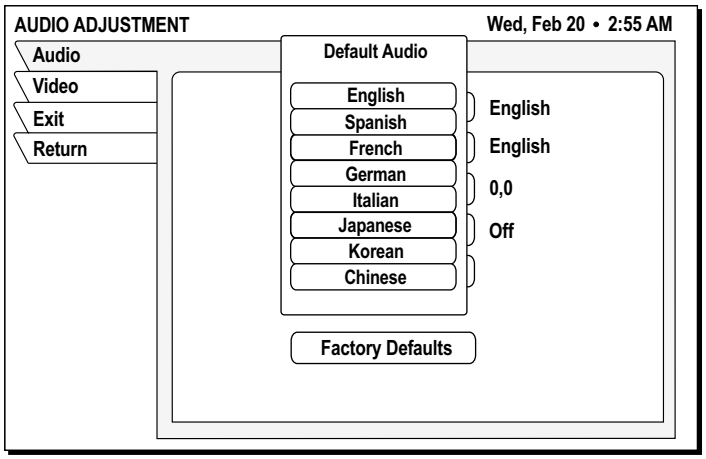
Adjusting Audio settings

Using Dolby Digital audio *(SAT-A65A only)*

Select the Dolby Digital audio (*SAT-A65A only*), then use the CHANNEL (CH +/–) button to step through the audio tracks for the current program. For programs that are offered in Dolby Digital, the double-D symbol (DD) appears with the audio track title.

Setting default and alternate audio

Your DIRECTV® Receiver supports alternate audio services. The ALT. AUDIO icon appears below the date and time in the Information Banner or program guide if these services are available for a particular program.



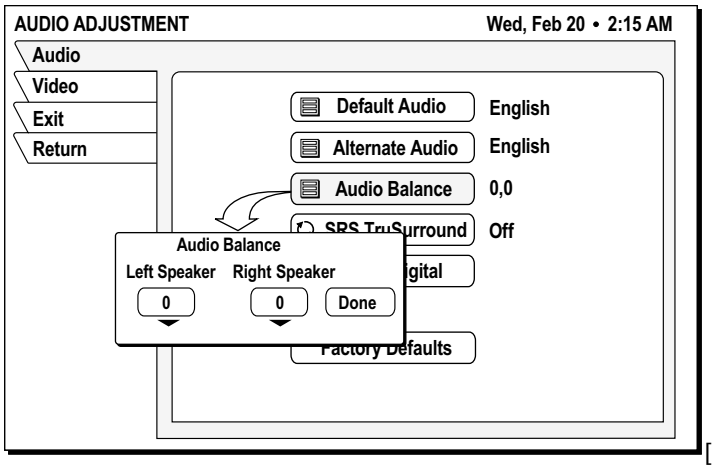
Setting the default audio language

1. Press the remote control INPUT button to access these services.
2. Highlight the desired language.
3. Press SELECT.

Occasionally, an audio track may be offered that is not being broadcast, in which case the audio will not change or you will not hear any audio. Change channels to restore the audio track to the one specified on the **AUDIO ADJUSTMENT** menu pane.

Adjusting audio balance

To adjust the left/right audio balance, highlight and SELECT ***Audio Balance***.



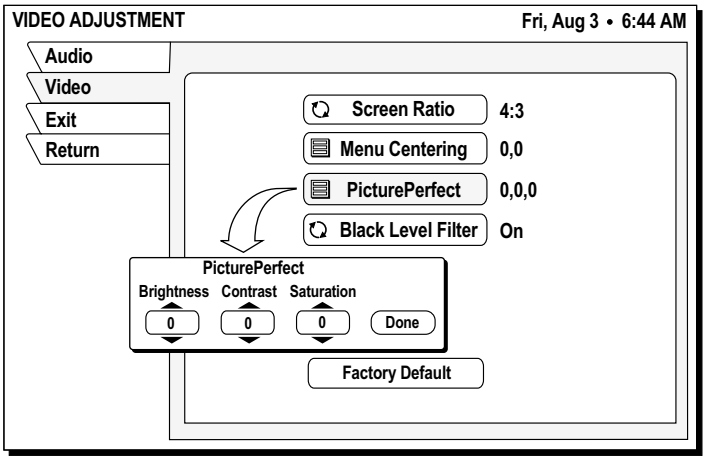
Setting left/right speaker balance

Use the navigation buttons to increase or decrease the ***Audio Balance*** settings in the pop-up menu.

Adjusting video

Adjust video display brightness, contrast, and saturation for the best on-screen image. (*SAT-A65A only*)

1. Highlight the **Audio & Video** tab from the **MAIN MENU**.
2. Press SELECT.
3. Highlight the **Video** tab.
4. Highlight the ***PicturePerfect*** menu pane button.
5. Press SELECT.



Adjusting the screen image controls

Use the navigation buttons to increase/decrease the screen ***Brightness***, ***Contrast***, and image ***Saturation*** settings in the pop-up menu.

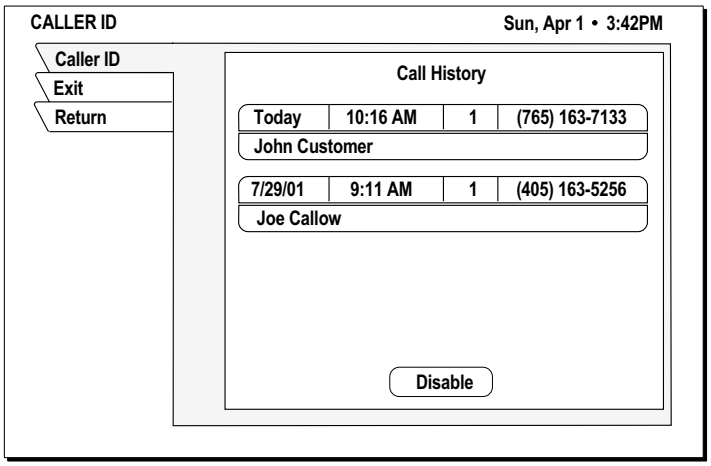
Using Caller ID

Your DIRECTV® Receiver shows you the name and telephone number (if available) of incoming telephone calls on your TV.

You can also see the name, time, and telephone number of recent calls on your TV as shown in the figure below.

You must subscribe to Caller ID from your local telephone company to use this feature.

Highlight and SELECT the **Caller ID** tab from the **MAIN MENU**.

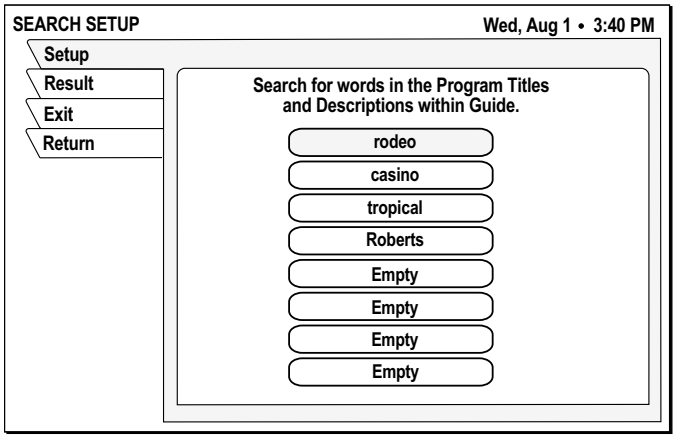


Call history screen

You can disable and enable the Caller ID feature from the **PREF** menu pane under the **System** tab available on the **MAIN MENU**.

Using Search

Use **Search** to find shows that have specific words used in titles or descriptions. Press the remote control SEARCH button to access the setup pane shown below.

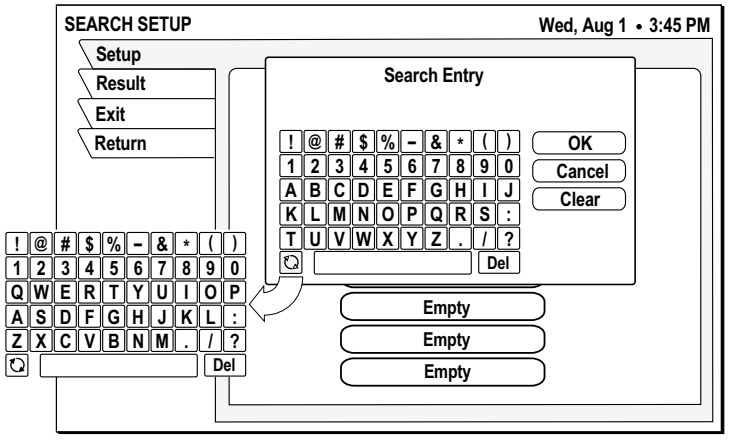


Search word entry list

You can specify up to eight search words or partial words to identify programming of interest to you. Program titles and guide descriptions containing your search words appear in the **Result** pane.

Highlight and SELECT one of the eight choices. A pop-up panel appears where you can enter a search word. If you enter “ALIEN,” Search might find the movie “Aliens” as well as any program which includes the word “alien” in the description.

Use the pop-up button board to enter search words. You can highlight and SELECT the *toggle* icon on the default button board (see figure) to change it to a standard keyboard layout, if you desire. Highlight the desired letter using the navigation buttons. Press SELECT to enter the letter. Select ***OK*** when you are finished entering the desired search words.



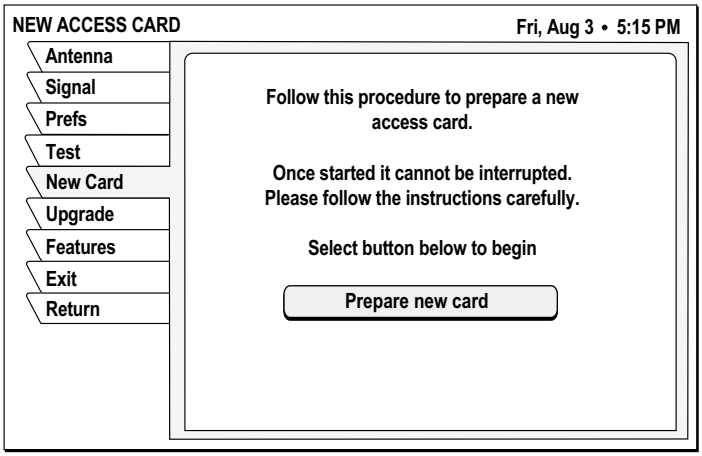
Using the toggle key to switch button board layout

Adjusting system settings

Select the **System** tab from the **MAIN MENU** to access the system functions described in this section.

New Access Card

Highlight the **New Card** tab to set the receiver to use a new DIRECTV® access card. SELECT the ***Prepare new card*** menu button and follow the on-screen instructions.

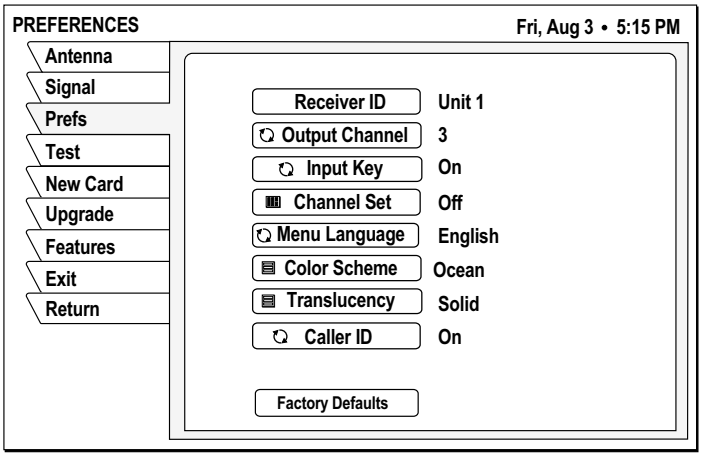


Prepare New Card menu pane

Use the **PREFERENCES** menu pane (shown in the figure below) to change the appearance of the on-screen menus and select how your DIRECTV Receiver operates with other devices. The **PREFERENCES** pane also allows you to:

- Change the receiver ID
- Set the receiver output channel to channel 3 or 4

- Enable or disable the INPUT button on your remote control.
- Lock the system on a particular channel.
- Select English or Spanish language menus.
- Enable or disable Caller ID on and off.



System Preferences menu pane

Change Receiver ID

If you are using more than one satellite receiver in the same room you may want to change the receiver ID to avoid any interference. If you are not using the RF antenna supplied with the SAT-A65A DIRECTV® Receiver, the ID can be either "50" or "51".

If you are using the RF antenna and RM-Y807 remote control *(SAT-A65A only)*, the RF ID can be a number from 00 to 15.

1. Press the CODE SET button on the remote control.
   2a. **Changing IR receiver ID:** Check that the RF antenna is not connected to the satellite receiver. Enter the desired receiver ID number, either "50" or "51", and press the SELECT button twice.
   2b. **Changing RF receiver ID:** Check that the RF antenna is connected to the satellite receiver and that you are using the RM-Y807 remote control *(SAT-A65A only)*. Enter the desired receiver ID number from "00 to "15", and press the SELECT button twice.
3. Check that the ID has been successfully set by testing the remote control to see that it controls that satellite receiver.

Set output channel

Use the ***Output Channel*** menu button to toggle between channels 3 and 4, whichever is unused in your area.

Input key enable/disable

The ***Input Key*** menu button allows you to turn the remote control TV/SAT button on and off.

Lock a channel

Use the ***Channel Set*** menu button to set the DIRECTV Receiver to permanently stay on a specific channel. When you enter a channel number (5-0-0, for example) then select **OK,** the receiver will always power up on that channel (channel 500 in this example). The receiver will ignore any attempts to change the channel. Set this option to "Off" to permit normal channel selection.

Select menu language

The ***Menu Language*** button allows you to display on-screen menus in English (default) or Spanish.

Change color schemes

You may select a menu color combination, or s*cheme*, from these choices: *Ocean*, *Storm*, *Foam*, or *Purple*.

Set translucency level

The Translucency level of the on-screen display may be set to ***Solid***, ***Heavy***, ***Medium***, or ***Light***.

Caller ID enable/disable

Use the ***Caller ID*** menu button to turn the Caller ID feature on and off. Incoming calls will not be displayed on-screen when the Caller ID feature is *disabled*.

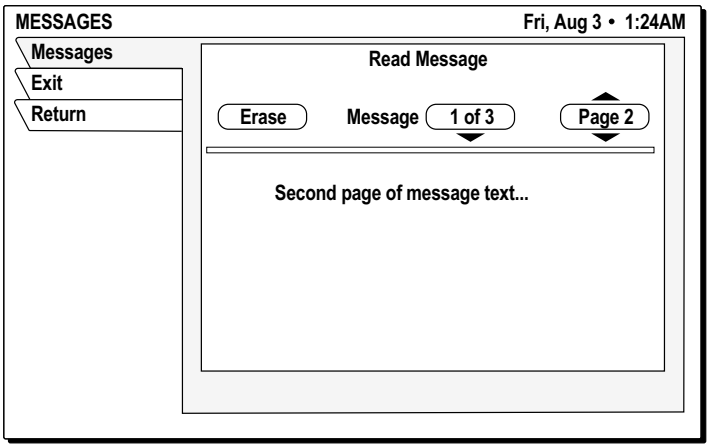
Restore factory default settings

SELECT the ***Factory Defaults*** menu button to restore the **PREFERENCES** options to the original factory settings.

Antenna, **Signal**, and **Test** functions are described Chapter 1 – *Getting started*.

Viewing Messages

DIRECTV® uses the **MESSAGES** feature to send you important information inform you of special events, and tell you about special offers.When you receive a new message, a *New Mail* icon appears at the top of all menus until you read the message. Highlight and SELECT the **View Messages** tab from the **MAIN MENU.**.



VIEW MAIL menu pane

Message – Cycle through multiple messages. SELECT the ***Messages*** button. Use the navigation buttons to navigate messages.

Page – Use the CHANNEL (CH +/–) button to cycle through multi-page message.

Erase – Permanently remove a message. Messages are automatically deleted as they become outdated or if space is needed for newer incoming messages.

This chapter describes:

- The different program guide styles (*see page 27*).
- Common program guide and menu features (*see page 29*).
- How to use the OneLine™ Guide (*see page 30*).
- How to set-up and use the Channel Mark Guide (*see page 31*).

Selecting a program guide style

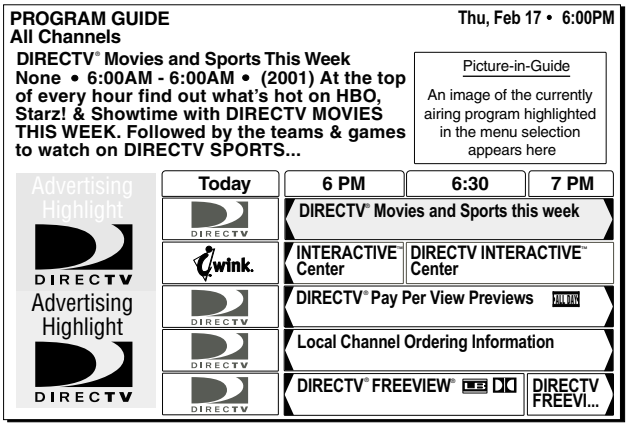
Personalize the program guide to show program listings that interest you. You determine how your choices appear onscreen by your guide selection. Available guide styles are:

- ***Grid*** with Picture-in-Guide or description
- ***Logo*** with Picture-in-Guide or description

Grid guide

- Easy to see what programs are available at a particular time.
- Shows up to 72 hours of current and upcoming programming.
- *Picture-in-Guide* displays the current program in the upper right corner.
- You can browse five channels of current and future programming at a time.
- Active ad highlights provide "one-click" access to products and services.
- Programs appear in a row with the channel on which they are broadcast.

Cells with arrows indicate the program started at an earlier time or continues later than can be shown in the selected time period.

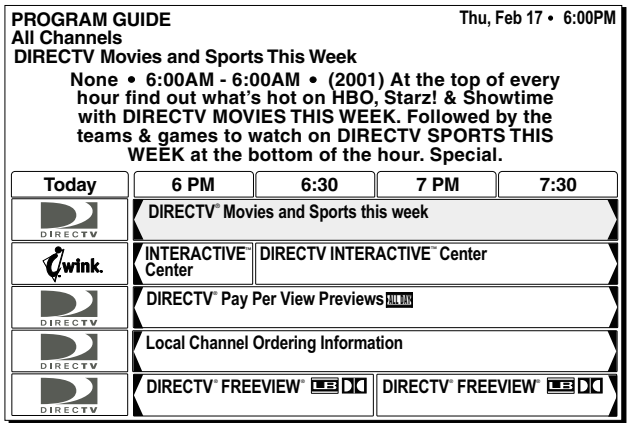

PROGRAM GUIDE
All Channels
Thu, Feb 17 • 6:00PM
DIRECTV® Movies and Sports This Week
None • 6:00AM - 6:00AM • (2001) At the top of every hour find out what's hot on HBO, Starz! & Showtime with DIRECTV MOVIES THIS WEEK. Followed by the teams & games to watch on DIRECTV SPORTS...
Picture-in-Guide
An image of the currently airing program highlighted in the menu selection appears here
Advertising Highlight
Today
6 PM
6:30
7 PM
DIRECTV® Movies and Sports this week
INTERACTIVE™ Center
DIRECTV INTERACTIVE™ Center
DIRECTV® Pay Per View Previews
Advertising Highlight
Local Channel Ordering Information
DIRECTV® FREEVIEW®
DIRECTV FREEVI...

Grid guide with Picture-in-Guide active

If a program title cannot entirely fit in the space provided, an ellipsis (…) indicates that a portion of the title is not shown.

- Browse up or down one channel at a time with the navigation buttons when the highlight is in the grid.
- Use the remote control CHANNEL (CH +/–) button to scroll through a full page of guide entries at a time.
- Move the highlight to the right to show later time periods.

The guide time expands to two hours when active ad highlights are unavailable. You can also turn the Picture-in-Guide feature off as shown in the figure below.


PROGRAM GUIDE
Thu, Feb 17 • 6:00PM
All Channels
DIRECTV Movies and Sports This Week
None • 6:00AM - 6:00AM • (2001) At the top of every hour find out what's hot on HBO, Starz! & Showtime with DIRECTV MOVIES THIS WEEK. Followed by the teams & games to watch on DIRECTV SPORTS THIS WEEK at the bottom of the hour. Special.
Today
6 PM
6:30
7 PM
7:30
DIRECTV® Movies and Sports this week
INTERACTIVE™ Center
DIRECTV INTERACTIVE™ Center
DIRECTV® Pay Per View Previews
Local Channel Ordering Information
DIRECTV® FREEVIEW®
DIRECTV® FREEVIEW®

Grid guide with Picture-in-Guide disabled (description-only mode)

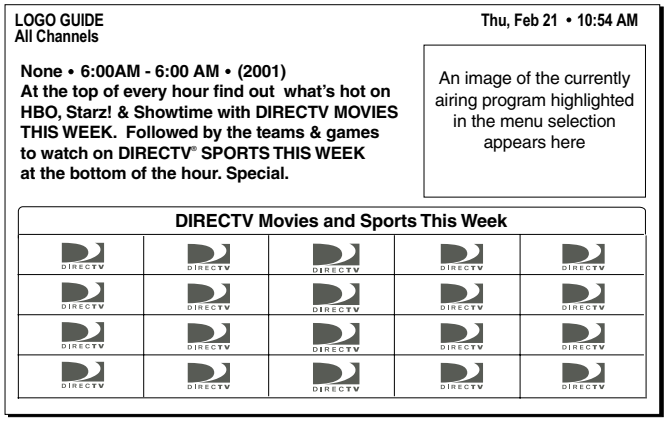
To turn off the Picture-In-Guide feature:

1. Press the remote control GUIDE button.
2. Press the GUIDE button again to access the **Options** menu tab.
3. Highlight the ***Picture-in-Guide*** menu button.
4. Press SELECT to toggle the feature off.

Press the remote control GUIDE button while the program guide appears on-screen to display the Guide Options menu.

Logo guide

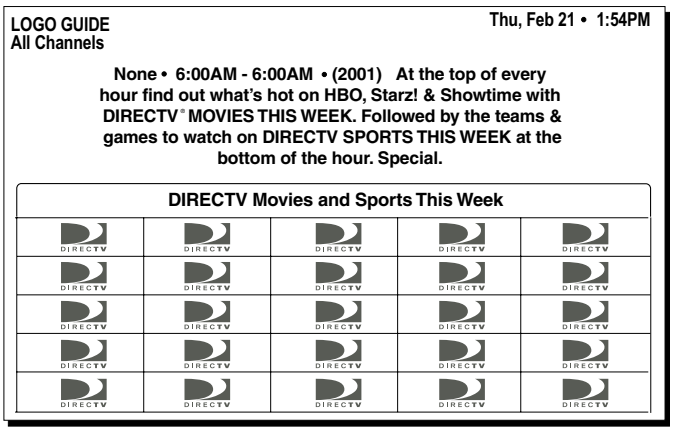
- Select your favorite channels, rather than selecting specific programs.
- The current program title appears above the logo grid as you highlight each channel. Only current programming is available in the Logo Guide.
- Video of the current program appears in the Picture-in-Guide window as you highlight each channel.


LOGO GUIDE
Thu, Feb 21 • 10:54 AM
All Channels
None • 6:00AM - 6:00 AM • (2001)
At the top of every hour find out what's hot on HBO, Starz! & Showtime with DIRECTV MOVIES THIS WEEK. Followed by the teams & games to watch on DIRECTV® SPORTS THIS WEEK at the bottom of the hour. Special.
An image of the currently airing program highlighted in the menu selection appears here
DIRECTV Movies and Sports This Week

Logo guide with Picture-in-Guide active

Use the CHANNEL (CH +/–) button to scroll through the guide entries a full page at a time, or use the navigation buttons to scroll through the guide entries one at a time.

Turn off the Picture-in Guide feature to display the most channels per screen, using the description-only mode (as shown at the top of page 29).


LOGO GUIDE
All Channels
Thu, Feb 21 • 1:54PM
None • 6:00AM - 6:00AM • (2001) At the top of every hour find out what's hot on HBO, Starz! & Showtime with DIRECTV® MOVIES THIS WEEK. Followed by the teams & games to watch on DIRECTV SPORTS THIS WEEK at the bottom of the hour. Special.
DIRECTV Movies and Sports This Week

Logo guide with Picture-In-Guide disabled (description-only mode)

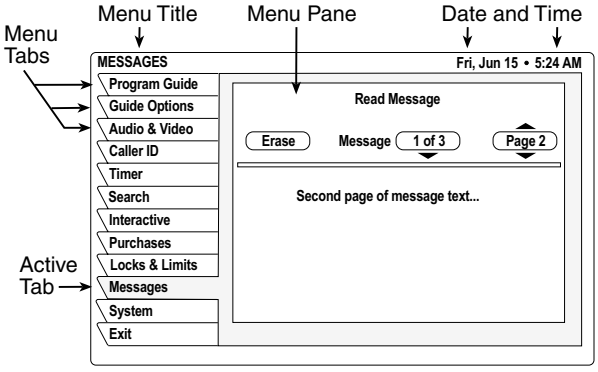
To select a guide style:

1. Press the remote control MENU button.
2. Use the navigation buttons to highlight and SELECT the **Guide Options** menu tab.
3. From the **Options** menu tab, highlight your selection and press SELECT.
4. Highlight and SELECT the **Exit** tab to return to the program you were viewing.

Program guide and menu features

The on-screen guides and menus provide a logical and convenient way to access system features and settings. Every guide and menu contain these elements:

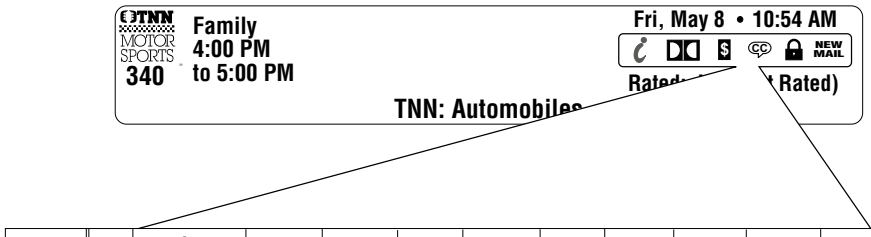
- The guide or menu title
- The day of the week, date, and time appear in the upper right corner
- Menu pane selection tabs



Common menu features

- Use the navigation buttons to move the highlight from tabs into menu panes.

- Below the date and time, small icons indicating the status of the system or details about the currently highlighted program title may appear. These icons also appear in the *Channel Banner* as shown below.
- The Channel Banner appears at the top of the screen whenever you use the CHANNEL (CH +/–) button to change channels. Press the remote control DISPLAY button to display the banner at any time.



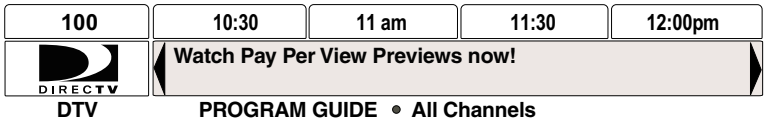
Icon	$			CC	NEW MAIL			CAN'T TAPE	ALT. AUDIO	DATA SVCS.	ALL DAY	LB
Meaning	Pay per view	Interactive programming available	Dolby Digital audio available	Closed caption available	Unread mail	Limits enforced	Limits over-ride	Taping not allowed	Other audio available	Data available	All Day Ticket	Letter Box format

Channel Banner Icons

More detailed information appears in the *Info Banner* beneath the Channel Banner if you press the DISPLAY button a second time. Banners disappear from the screen after a few seconds, but you can remove them from the screen instantly by pressing the EXIT button on the remote control.

The OneLine™ Guide

The OneLine™ Guide appears across the bottom of your screen when you press the navigation buttons up or down while watching TV. You will see the channel call sign and number, titles, and program start and end times as shown below.



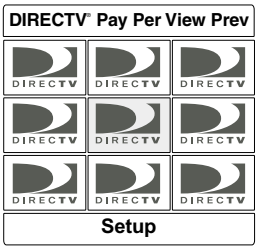
OneLine Guide

- Use the navigation buttons to scroll to right to see upcoming program titles.
- Use the navigation buttons to move up or down while using the OneLine Guide to see the next or previous available channel. Press SELECT to tune to the channel.
- You can also enter a channel number using the numeric keypad to display the OneLine Guide for that channel. OneLine Guide content varies according to **FAV LIST** menu selections and other filters.
- Press the EXIT button on the remote control to instantly remove the guide.

Using Channel Mark

The Channel Mark feature is a quick access guide to nine of your favorite channels.

- While no other menus are displayed, press the SELECT button on the remote control to show the Channel Mark panel.
- Use the navigation buttons to highlight the desired channel. The panel header displays the title of the program currently airing on the highlighted channel.
- Press SELECT to tune to that channel.



Channel Mark Menu

To set TurboTune channels:

- Select **Guide Options** from the **MAIN MENU**, then use the **Ch. Mark** menu tab.
- Highlight an unassigned channel box and press SELECT.
- Enter the desired channel using the navigation buttons, numeric remote control buttons, or the CHANNEL (CH +/–) button.

This chapter explains:

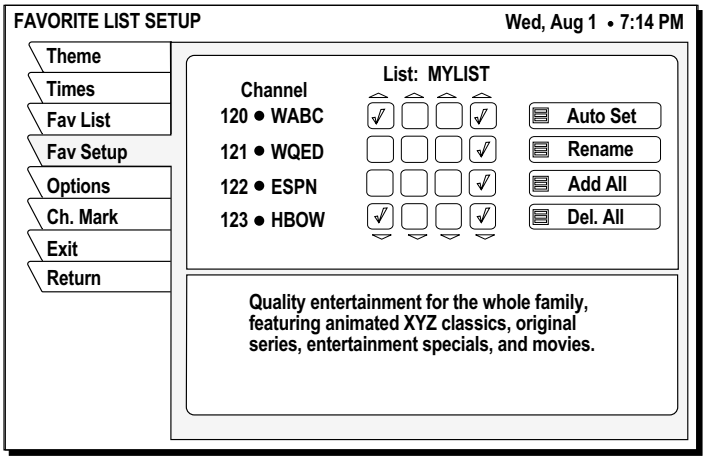
- How to create a channel list (*this page*).
- How to rename a channel list (*see page 34*).
- Using ***Auto Set***, ***Add All***, and ***Del All*** functions (*see page 34*).
- How to use program guide Theme filters (*see page 35*).
- How to change guide times (*see page 36*).

Using favorite channel lists

Channel Lists are provided to help you organize the hundreds of available channels into groupings suitable for your household. Each list can contain as many or as few channels as you wish. You can customize these groups several ways. For example, ***Fav. A*** could be Dad's favorite channels, ***Fav. B*** could be Mom's favorites, ***Fav. C*** could be the kids' channels, and ***Family*** could be all channels that Mom and Dad have deemed appropriate for the entire family.

Creating a channel list

1. Press the remote control MENU button.
2. Select the **Guide Options** from the **MAIN MENU**.
3. Use the navigation buttons to highlight the **Fav Setup** tab.
4. Press SELECT to open the **FAVORITE LIST SETUP** pane shown below.



The four columns of small boxes on the right hand side of the pane are the *Tag Boxes*. The first three columns are the ***Fav.A***, ***Fav.B***, and ***Fav.C***. channel lists. The farthest right hand column is the ***Family*** list.

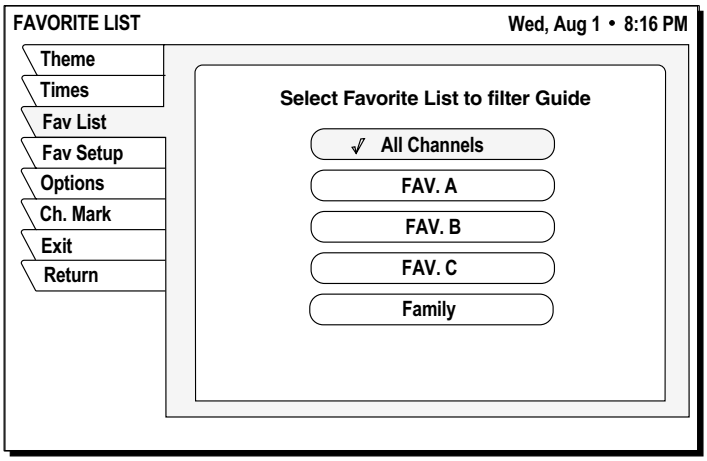
> *Note: If the receiver is locked, only existing Family* list channels are accessible. If the ***Family*** list has not had channels added to it, no channels can be viewed without first unlocking the receiver. To avoid this inconvenience, create the ***Family*** list before locking the receiver. See Chapter 7 – *Using access controls*, on page 37 for additional details about controlling system access.

5. Use the navigation buttons to highlight the tag box that corresponds to the channel number and list that you wish to create or change.
6. Press SELECT to add or remove the check mark, which indicates that the channel in that row is included in the list shown at the top of the column.

To help you decide whether to include or exclude a certain channel, the title of the program currently airing on that channel appears at the top of the screen.

7. Scroll up or down to view channels and descriptions. Press SELECT to add channels to your list.
8. When you have added all of the channels you want to your list, use the navigation buttons to highlight and SELECT the **Exit** tab to resume viewing.

Once you have created your lists. use the remote control FAVORITE button to cycle through them quickly and easily. Each press cycles to next channel list. You can also select a list by highlighting the **Fav List** tab.



Renaming a channel list:

1. Highlight the ***Rename*** button and press SELECT.
   A **Rename List** pop-up menu appears. You can rename the first three lists. You cannot rename the ***All*** and ***Family*** lists.
2. Highlight the list you wish to rename and press SELECT. A buttonboard pop-up panel appears.
3. Highlight the desired letter using the navigation buttons.
4. Press SELECT to enter the letter.
5. When finished, Select ***OK***.

Creating an Auto Set list

1. SELECT the ***Auto Set*** button. A pop-up menu appears showing each of the channel lists.
2. Highlight and SELECT a channel list to be programmed.
   Once selected, the **Auto Set Progress** pop-up status panel appears. It may take several minutes for the receiver to scan through all of the channels and determine which ones you are authorized to receive. The results of this scan will be stored in the designated channel list.

   Note: *Auto Set* may exclude some channels such as the Music Choice channels or include some pay per view channels. This does not mean that the receiver is faulty. These channels were excluded or included due to the DIRECTV® Receiver's analysis process. You can manually edit the lists to correct these oversights.

Adding and removing all channels

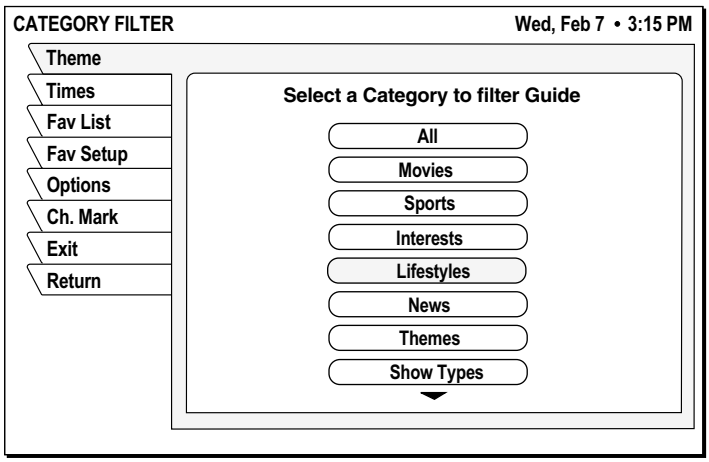
Selecting the ***Del All*** menu button clears all channels from the list you have chosen. ***Add All*** has the opposite effect, creating a list of all the channels you are authorized to receive.

Filtering the program guide

Press the remote control GUIDE button while in a guide. A pop-up menu provides filtering tools and ways to access other guide styles. By combining each of these filter options, you can quickly narrow down channels to those that match your viewing interests.

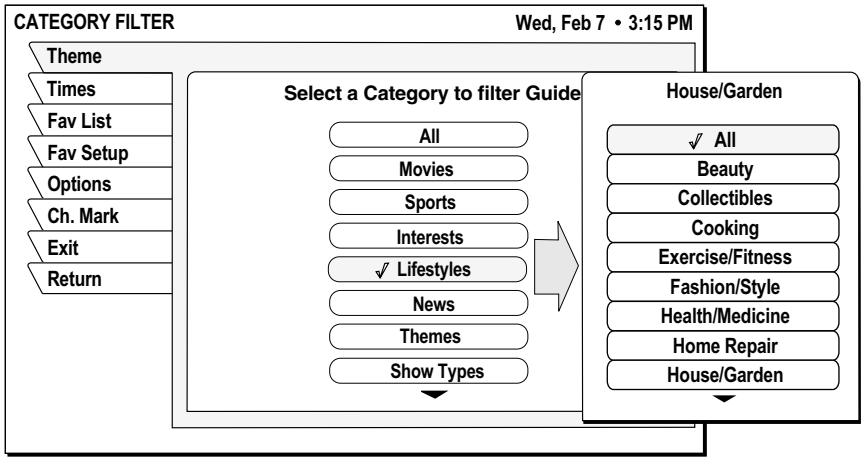
Using Theme Filters

From the **MAIN MENU**, select the **Guide Options** tab. The **CATEGORY FILTER** menu appears, listing all available program category groups.



After choosing a category (other than ***All***), the drop-down menu is replaced by the ***Types*** pop-up menu. This menu allows you to further refine a chosen theme. In addition to ***All***, you can select popular categories that can be quickly selected using the remote control GUIDE button.

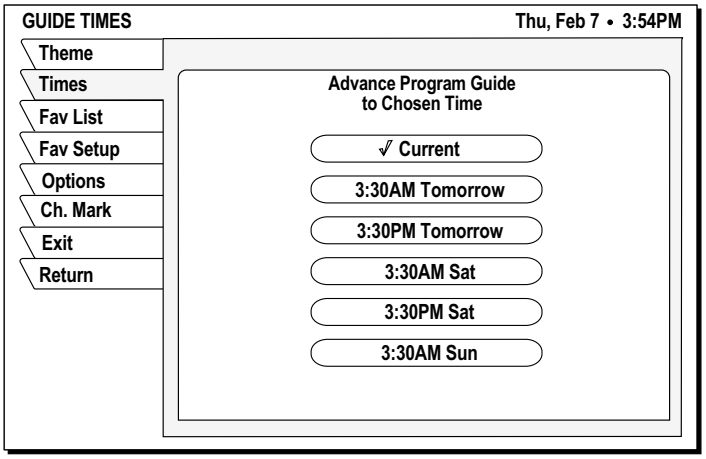
For example, if you chose ***Lifestyles*** for the category, you can now choose a subcategory such as ***Beauty***, ***Collectible***, ***Cooking***, ***Exercise/Fitness***, and others as shown in the figure below.



After selecting one of these subcategories, the guide will be further filtered to show only those channels offering programs of the selected category and type.

Selecting guide times

Highlight the **Times** menu tab. The **GUIDE TIMES** menu shown below provides easy access to future programming information. Simply select the time you want the guide to begin. After a few seconds, the selected guide appears.



This chapter explains:

- How to lock and unlock the system (*this page*).
- How to set maximum rating limits (*see page 38*).
- Setting maximum spending and time limits (*see page 39*).

Locks & Limits provides settings to help you control the viewing restrictions of DIRECTV® programming. When accompanied by the channel lists, these limits provide a great degree of control. The DIRECTV Receiver must be locked for the TV Timer, Rating and Spending limits to be enforced.

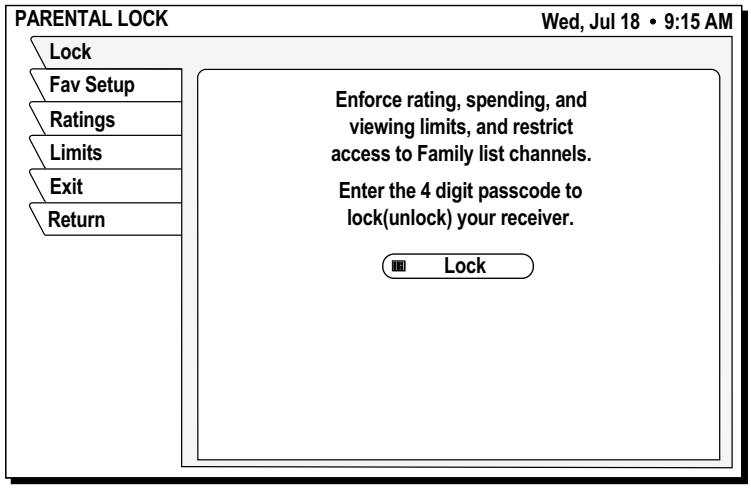
Locking & unlocking the system

When you first receive your satellite system, it will be unlocked; (i.e., no limits or restrictions are in effect). You must lock the system to enforce the limits (spending, ratings, TV timer, and "Family" favorite list).

> **Note:** Once the DIRECTV Receiver is locked, only existing *Family* list channels will be accessible. If the *Family* list does not contain any channels, no channels can be viewed without first unlocking the receiver. To avoid this, verify the contents of the *Family* list before locking the receiver.

How to lock the system

When you SELECT the ***Lock*** button, the **LOCK SYSTEM** pop-up panel appears.



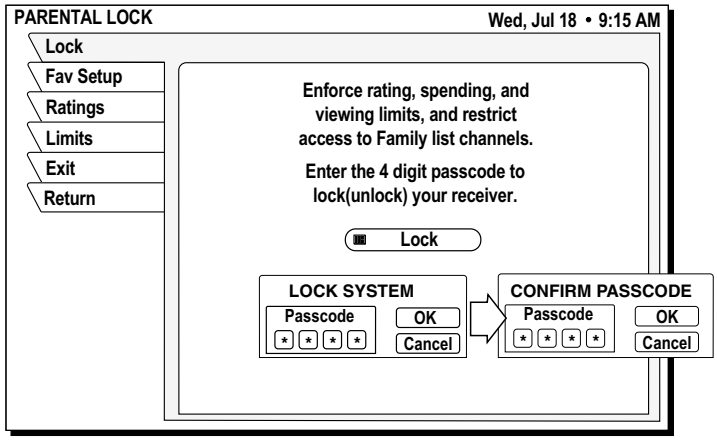
1. Enter a four-digit passcode using the remote control.
2. Highlight and SELECT ***OK.***
3. Enter the code again to confirm.
4. Highlight and SELECT ***OK***.

*Press **Cancel** to clear the locking process.*

If you forget your four-digit code, you must call DIRECTV.

Once you select ***OK***, the satellite receiver is locked. You must enter the passcode to unlock it. A lock symbol icon appears at the top of every menu screen to remind you that the system is locked.

.



Unlocking the system

To remove the lock and its restrictions:

1. Highlight the **Locks & Limits** tab from the **MAIN MENU**.
2. SELECT the ***Unlock*** menu button.
3. Enter the code you entered to lock the system.

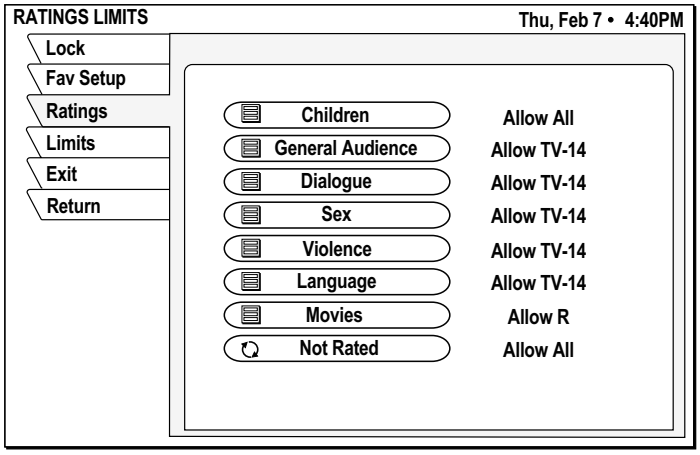
*The button used to lock the system is also used to **unlock** the system.*

Once the system is unlocked, **all limits and restrictions are removed!** Choose ***Cancel*** to keep the lock in effect.

Setting ratings limits

Program ratings indicate the suitability of a program's content for a given audience.

Highlight the **Ratings** tab. Highlight and SELECT the type of programming content you wish to restrict.



For example, if you select the violence menu button, a ratings pop-up submenu appears as shown in the figure on page 39.

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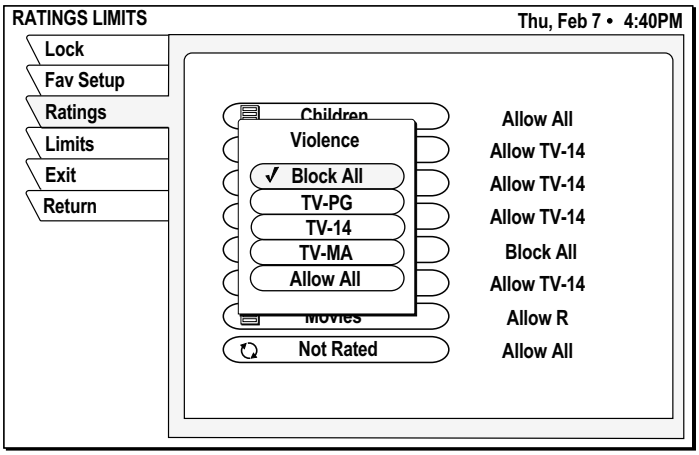


Highlight and SELECT the highest rating for violent program content you wish to allow. You may choose to ***Block All*** or ***Allow All*** instead of setting a specific limit.

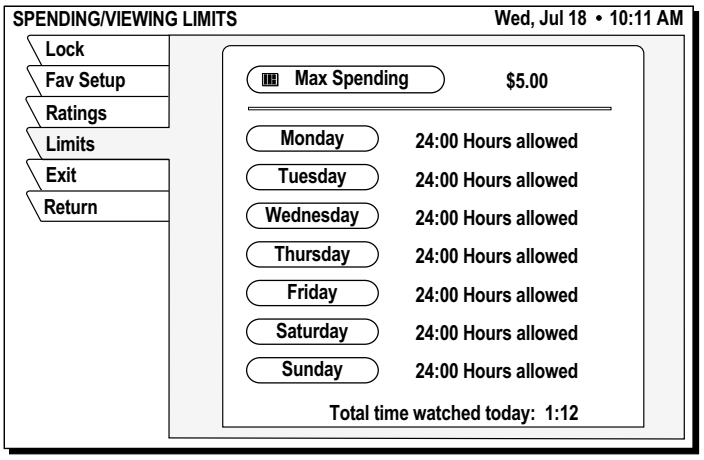
Setting spending and time limits

Highlight the **Limits** tab to set the maximum spending limit. You can set the maximum purchase price on a per-event basis.

To change the displayed limit:

1. Highlight the ***Max Spending*** button
2. Press SELECT to display the **SPENDING LIMIT** pop-up panel.

Use this menu to set the specific hours and maximum hours the satellite receiver can be used for viewing.



3. Use the number buttons on the remote control to set the limit or use the navigation buttons to increase or decrease each digit.
4. Use the navigation buttons to highlight the digit that you want to change. The maximum limit is $655 per event.
5. Highlight ***OK*** and press SELECT to confirm the entered amount.

Questions? Did we forget to tell you something? We have compiled some the most common questions and their answers here. We hope they help!

Q *I had a signal but now I am getting a message "Searching for satellite signal. To access related utilities, press SELECT." What happened?*

A Rain clouds and snow can affect the satellite signal reception. This loss of signal is temporary. Also check for new growth on trees and bushes that could be blocking the signal. One other possibility is that the wind or someone has moved the satellite dish antenna.

Q *Why can't I control my TV?*

A Before you can control your TV, VCR, or any other device, you must program your remote control to match your different devices. See Chapter 3 – *Using the remote control* in this manual for specific instructions. If you have already successfully programmed your remote control, try pressing the appropriate function key or sliding the device switch to the appropriate device to put your remote in the proper mode. Then try controlling that device. Also, make sure that the batteries in the remote control are fresh.

Q *My satellite receiver does not respond when I press keys. What's wrong?*

A Most likely, if the front panel keys work but the remote control doesn't work, try pressing the SAT button (or moving the device switch to SAT on the RM-Y812 remote) before trying to control the digital satellite receiver. If that doesn't work, or if the front panel buttons don't work either, unplug your digital satellite receiver for 30 seconds, then plug it back in.

Q *Some channels look good, while others freeze or indicate that no signal is available. What's wrong?*

A The most common causes for this behavior relate to an improperly grounded satellite cable. Check the cable between your digital satellite receiver and the satellite dish antenna. Confirm that RG-6 (not RG-59) cable is used and does not exceed 100 feet in length. Longer cable runs require amplification. This special amplifier is available from your dealer.

Q *How can I watch one channel while recording another?*

A With only one digital satellite receiver, unfortunately, you can't. Each receiver can only decode one channel at a time.

Q *I'm getting a message to call a telephone number. Why?*

A There are many different reasons for this. If you want to watch the channel that is displaying the message, call DIRECTV at 1-800-347-3288.

Q *Why don't I have an on-screen offer to purchase pay per view programs?*

A There are three possibilities; your digital satellite receiver must be connected to a phone line and it is not, or DIRECTV doesn't realize that your phone line is connected or has disabled your ability to make on-screen purchases. Call DIRECTV at 1-800-347-3288 for assistance.

Q *I don't see Caller ID information appear on screen when I receive a telephone call. What could be wrong?*

A There are several possible reasons. First, check that the satellite receiver is connected to an active telephone jack. Verify that the Caller ID feature is turned on (refer to page 26). Confirm that you subscribe to Caller ID service from your telephone company. Also check that your antenna is properly grounded as shown on page iv, as this can affect how the Caller ID feature works.

Q *Can I receive my local TV programs through my digital satellite receiver?*

A There are three ways to receive local programming:

- If you are in an area where local programming is available via satellite and have the proper satellite dish antenna, contact DIRECTV to arrange for the necessary subscription package.
- Install a traditional antenna (i.e., roof mounted, attic mounted, rabbit ears).
- Arrange for basic or "lifeline" cable TV service from your local cable company.

If you select item 1 above, your local programming appears in the program guide like any other channel. For options 2 or 3, connect the local signal to the IN FROM ANTENNA jack on the back of your digital satellite receiver. Use the TV/SAT key to switch between DIRECTV® programming and local programming provided on the OUT TO TV connector.

Q *If I have questions about my satellite system or need to have it serviced, who should I call?*

A For questions about your equipment, contact the Sony Satellite System Information Center at 1-800-838-SONY (7669).

If you need assistance with your subscription, such as adding channels, contact DIRECTV at 1-800-347-3288.

Q *I think I set an event to record on my VCR, but when I played the tape back nothing was there. What could be wrong?*

A There are several possible reasons for this. First, check that the VCR was programmed correctly and left turned on and the input matches the output from your digital satellite receiver. Confirm that you were authorized to tape the chosen program.

Q *Why do I need to connect the satellite receiver to a telephone line?*

A The telephone connection is used by the satellite receiver to report purchase activity to DIRECTV.

Q*Why do I need to connect the satellite receiver to a telephone line?*

A The telephone connection is used by the satellite receiver to report purchase activity to DIRECTV.

Q *I picked up my telephone and it was making a hissing and squealing sound. Why?*

A Your digital satellite receiver was reporting any pay per view activity that may have occurred. This rarely happens and only lasts for a minute or so.

Q *What if my question isn't listed here?*

A Contact your dealer or the Sony Satellite System Information Center at 1-800-838-SONY (7669).

Manufacturers device control codes B

The RM-Y807 and RM-Y812 remote controls are compatible with most models of the following brands:

TV Codes

Manufacturer	Code
Sony	101
Admiral (M. Ward)	102, 109, 114
ABC	112
Bell & Howell (M. Ward)	109, 114, 138
Broksonic	103, 112
Craig	120–123
Croslex	111
Curtis Mathes	103, 119, 123
Daewoo	103, 135, 136
Daytron	113
Emerson	103, 113, 115, 120–123
Fisher	125
General Electric	102, 103, 107, 118
Goldstar	103, 112, 113, 130
Hitachi	103, 113, 131, 132
JCPenney	102, 103, 107, 118, 130
JVC	128, 129
KTV	103, 113, 123, 133, 134
LXI (Sears)	102, 103, 111, 112, 119, 125
Magnavox	107, 111–113
Mitshubishi/MGA	103, 112, 124
NEC	103, 112
Panasonic	107, 116–118
Philco	109, 111, 118
Philips	111
Pilot	103
Pioneer	118, 119, 137
Portland	103, 108
Quasar	107, 110
Radio Shack	102, 112, 123, 124
RCA/Proscan	102–108
Samsung	103, 112, 113, 126
Sanyo	125
Scott	112, 123
Sharp	113–115
Signature 2000 (M. Ward)	109, 114
Sylvania	108, 111, 112
Symphonic	123, 139
Teknika	109
Toshiba	114, 119
Videch	103, 112, 131
Wards	103, 112, 113, 115
Zenith	108, 110

VCR Codes

Manufacturer	Code
Sony	301, 302, 303
Aiwa	338
Audio Dynamic	314, 347
Bell & Howell (M. Ward)	330, 343
Broksonic	317, 319
Canon	308, 309
Citizen	332
Craig	302, 315, 332
Curtis Mathes	304, 309, 338
Daewoo	309, 312, 341
DBX	314, 336, 337
Dimensia	304
Emerson	316–320, 341
Fisher	330, 333–335
Funai	338
General Electric	304, 309, 329
Go Video	322, 339, 340
Goldstar	332
Hitachi	304, 305, 306, 338
HQ	315
Instant Replay	308, 309
JC Penney	304, 305, 309, 314, 330, 336, 337
JVC	314, 336, 337
Kenwood	314, 332, 336, 337
LXI (Sears)	305, 330, 332–335, 338
Magnavox	308–310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	304, 305
Mitshubish/MGA	323–326
Multitech	321,325, 338
NEC	314, 336, 337
Olympic	308, 309
Optimus	327
Panasonic	306–309
Pentax	304, 305
Philco	308, 309
Phillips	308–310
Pioneer	308
Quasar	306, 308, 309
RCA/Proscan	304, 305, 308–313
Realistic	309, 324, 328, 330, 335, 338
Sansui	314

VCR Codes (continued)

Manufacturer	Code
Singer	315
Samsung	313, 321, 322
Sanyo	330, 335
Scott	312, 313, 321, 323–326, 335
Sharp	325, 327, 328
Shintom	315
Signature 2000 (M. Ward)	327, 336
Sylvania	308–310, 338
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336–338
Technics	308, 309
Teknica	338, 342
Toshiba	311, 312
Wards	327, 328, 331, 332, 335
Yamaha	314, 330, 336, 337
Zenith	331

DVD Codes (RM-Y807 Only)

Manufacturer	Code
Sony	601
Panasonic	604
Pioneer	605
RCA	602
Toshiba	603

AMP (Amplifier) Codes (RM-Y807 Only)

Manufacturer	Code
Sony	501, 521
Denon (Sharp)	516–518
Harmon	519
JVC	506–508
Kenwood	504, 505
McIntosh	520
Onkyo	512, 513
Pioneer	502, 503
Technics	509–511
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Limited Warranty

Digital Satellite Receivers

SONY ELECTRONICS INC. ("SONY") warrants this hardware Product against defects in material or workmanship as follows:

1. Labor: For a period of 90 days from the original date of purchase, if the Product is determined to be defective, SONY will repair or replace the Product at no charge. After this 90 day period, you must pay for all labor charges.
2. Parts: For a period of one year from the original date of purchase, SONY will supply, at no charge, new or rebuilt replacements in exchange for defective parts. Any replacements will be warranted for the longer of the remainder of the original warranty period or 90 days from the installation of the parts by a SONY authorized DIRECTV System installer or facility.

To obtain warranty service:

–If the Product was installed by a SONY authorized DIRECTV System installer, contact that installer for instructions.

–If the Product was not installed by a SONY authorized DIRECTV System installer, you must take the Product or deliver the Product in either its original packaging or packaging affording an equal degree of protection (with freight prepaid), to a SONY authorized DIRECTV System service facility. To locate the closest such facility, please call the telephone number listed below.

This warranty does not cover customer instruction, installation, set up adjustments or signal reception problems. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of, or to any part of the Product. This warranty does not cover improper installation (if not installed by a SONY authorized DIRECTV System installer), loss of use of the Product, or wasted programming charges due to Product malfunction. This warranty does not cover damage due to improper operation or maintenance, connection to improper voltage supply, or attempted repair by anyone other than a facility authorized by SONY to service the Product. This warranty does not cover software contained in the Product, which is subject to a separate Software License Agreement. This warranty is valid only in the United States. Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the Product is within the Warranty period must be presented to obtain warranty service.

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For your convenience, SONY ELECTRONICS INC. has established telephone numbers for frequently asked questions:

For assistance with installation, contact the dealer from whom you purchased your Digital Satellite Receiver.

For product information or operation, for service assistance or for resolution of a service problem, call:

Sony Satellite System Information Center
1-800-838-SONY (7669)

For an accessory or part not available from your authorized dealer, call:

1-800-488-SONY (7669)

About Sony Customer Support

Every DIRECTV System manufactured by Sony comes with Sony's Express Support at no charge to you. In the event of a system failure meeting the requirements stated above which occurs within ninety (90) days from the original date of purchase, our Express Support Program can have a replacement receiver on its way to you via overnight Federal Express (for calls Monday-Friday until 7:30 pm Eastern Time; Saturday delivery depends upon zip code). All it takes is a valid credit card to cover a security deposit, and Sony will pay freight in both directions.

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General

This Agreement shall be deemed to have been made and executed in the State of California and both parties agree that any dispute arising hereunder related to this Agreement or the Product will be governed by laws of the State of California, exclusive of its conflicts of law principles and that the courts in the County of San Diego, California will have exclusive jurisdiction over all such disputes. FURTHER THE PARTIES HEREBY WAIVE TRIAL BY JURY IN CONNECTION WITH ANY ACTION OR SUIT ARISING UNDER THIS AGREEMENT OR OTHERWISE ARISING FROM THE RELATIONSHIP BETWEEN THE PARTIES HERETO. This Agreement shall be binding upon the parties’ authorized successor and assignees. Neither party’s waiver of any breach or failure to enforce any of the provisions of this Agreement at any time shall in any way affect, limit or waive such party’s right thereafter to enforce and compel strict compliance with every other provision. No modification of this Agreement shall be effective unless in writing signed by both parties.

Specifications

Input Jacks	Cable Type
VHF/UHF IN	75 ohm f-type
SATELLITE IN	75 ohm f-type
RF REMOTE *(SAT-A65A only)*	Supplied RF Antenna
AC IN (120 V, 60 Hz)	Supplied AC Power Cord

Output Jacks SAT-A65A	Cable Type
VHF (SAT)/UHF OUT	75 ohm f-type
VCR CONTROL	Supplied VCR Controller
LOW SPEED DATA	RJ-11
DIGITAL AUDIO OUT (OPTICAL)	Optical Rectangular
S-VIDEO	4-pin mini DIN
AUDIO L/R (2)	RCA Type
VIDEO (2)	RCA Type
TEL LINE	RJ-11

Output Jacks SAT-B65A	Cable Type
VHF (SAT)/UHF OUT	75 ohm f-type
S-VIDEO	4-pin mini DIN
AUDIO L/R	RCA Type
VIDEO	RCA Type
TEL LINE	RJ-11

General	
Input Frequency	950-1450 Mhz
Power Requirements	120 V AC, 60 Hz
Power Consumption	24 W typical
Dimension (w/h/d)	11.0 x 2.5 x 8.4 inches 280 x 64 x 214 mm
Weight (unit)	3.5 lbs. (1.6 kg)

Supplied Accessories	
Remote Control	RM-Y807 (SAT-A65A) RM-Y812 (SAT-B65A)
Size AA Batteries (2)	
Access Card	
Audio/Video Cable	
S-Video Cable	*(SAT-A65A only)*
Coaxial (RF) Cable	
Telephone Line Cord	
VCR Controller (1)	*(SAT-A65A only)*
RF Antenna	*(SAT-A65A only)*

Optional Sony-brand Digital Satellite Receiver Accessories

Satellite Antenna
SAN-18D4
Satellite Antenna
SAN-24MD1
Local TV Antenna
ANJ-AA1

Design and specifications are subject to change without notice.

Contact Sony with questions about your Digital Satellite Receiver:
1-800-838-SONY (7669)

Sony online

www.sony.com

www.sony.com/support

Contact DIRECTV with questions about service or programming:
1-800-DIRECTV (347-3288)
www.DIRECTV.com

Printed in U.S.A.

SAT-A65/A65A RM-Y807
SAT-B65/B65A RM-Y812
SAS-B65D (INCLUDES B65/B65A AND SAN-18D5)

SERVICE MANUAL

☛ *US Model*

CORRECTION- 1

SUBJECT: ADDED DESTINATION TO FRONT COVER CORRECTED P/N ON BACK OF MANUAL

Correct the service manual as shown.
File this Correction with the service manual.

DIRECTV®

DIGITAL SATELLITE RECEIVER / SATELLITE ANTENNA

SONY®

Sony Corporation
Sony Technology Center
Technical Services
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